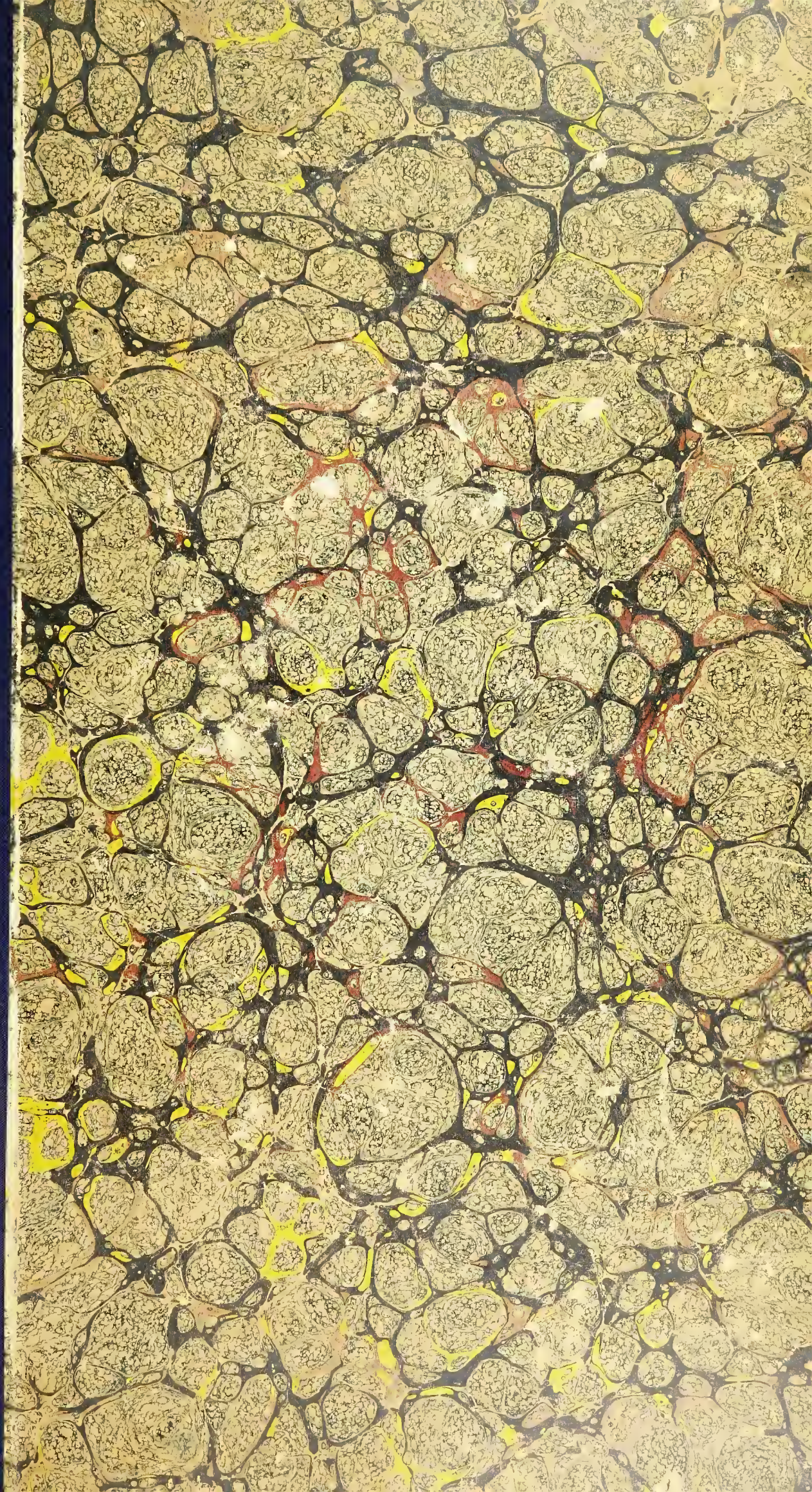




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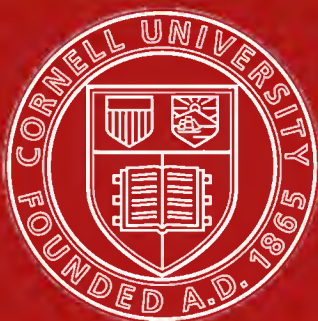
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BOARD OF AGRICULTURE AND FISHERIES AND BOARD
OF EDUCATION.

REPORT

OF THE

RURAL EDUCATION CONFERENCE

ON

COUNTY STAFFS OF INSTRUCTORS IN AGRICULTURAL SUBJECTS.



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This Report was prepared by the Rural Education Conference, which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June, 1910. The Boards have not yet considered the Report, but have thought it desirable to publish it for general information.

1st December 1910.

RURAL EDUCATION CONFERENCE.

First Report.

1. We submit the following report on the first reference contained in Sir Robert Morant's letter of 29th July 1910.

This reference is as follows :

“As to whether it is desirable that each county should have its own staff of instructors in Agriculture, Horticulture, and other allied subjects, or whether it is possible that the services of a single staff should be made available for groups of contiguous counties ; as to the training and qualifications which such instructors should possess in order to enable them to secure the confidence of agriculturists ; and as to the manner in which the staff should be composed for each county or group of counties in England and Wales in view of the different branches of rural industry followed in each locality.”

2. In considering the desirability or possibility of grouping counties for agricultural staffing, we think that regard should first be had to the present position of County Staffs. The County Councils Association arranged to make some inquiries from the counties in the matter on our behalf, and particulars have been received from 38 counties.

Besides the return supplied by the County Councils Association the chief information available consists of the particulars contained in the Report of the Board of Agriculture on the distribution of Grants for 1908-9 (Cd. 5388). Some of this material is somewhat out of date, and it is not possible to set out particulars in respect of each county which are accurate at the present time.

As far as we can gather (from the material before us) the position is as stated in the five subsequent paragraphs.

3. In the following fourteen counties County Agricultural Instruction is conducted entirely by the County Staff :—

Bedford, Cornwall, Devon, Dorset, Essex, Isle of Wight, Hampshire, Hereford, Lincoln (Kesteven), Middlesex, Somerset, Warwickshire, Worcestershire, Monmouthshire.

In the case of Bedfordshire, Essex, and Hampshire the County Staff is connected with an institution situated within the county and maintained by the county entirely or mainly for its own purposes.

4. In the following twelve counties the main work is done by the County Staff, but the work is supplemented by courses provided by a Central Institution usually available for more than one county. The name of the Central Institution is shown in brackets :—

Bucks (Agricultural Department of University College, Reading).

Cumberland (Agricultural Department of Armstrong College, Newcastle-on-Tyne).

(Gloucester (Royal Agricultural College, Cirencester).

Hertford (Agricultural Department of Cambridge University and Essex County Laboratories).

Lancashire (County Agricultural School, Harris Institute, Preston).

Oxfordshire (Agricultural Department of University College, Reading).

Staffordshire (Harper Adams Agricultural College, Newport, Salop).

Suffolk East (Agricultural Department of Cambridge University and Eastern Counties Dairy Institute).

Westmorland (Agricultural Department of Armstrong College, Newcastle-on-Tyne).

Wiltshire (Royal Agricultural College, Cirencester).

Glamorgan (Agricultural Department of University College, Cardiff).

Pembroke (Agricultural Department of University College of Wales, Aberystwyth).

The County Staff of Cumberland and Westmorland is connected with Newton Rigg Farm School maintained by the counties mainly for their own purposes.

5. In the following sixteen counties the instruction is given mainly by means of the Staff provided by a Central Institution (the name of which is shown in brackets) with additional Instructors employed by the county :—

Berks (Agricultural Department of University College, Reading).

Cambridge (Agricultural Department of Cambridge University).

Cheshire (Holmes Chapel Agricultural College).
 Derbyshire (Midland Agricultural College, Kingston).
 Durham (Agricultural Department of Armstrong College, Newcastle-on-Tyne).
 Huntingdon (Agricultural Department of Cambridge University).
 Kent (South Eastern College, Wye).
 Lincoln (Lindsey) (Midland Agricultural College, Kingston).
 Norfolk (Agricultural Department of Cambridge University and Eastern Counties Dairy Institute, Ipswich).
 Northampton (Agricultural Department of Cambridge University).
 Northumberland (Agricultural Department of Armstrong College).
 Shropshire (Harper Adams Agricultural College).
 Suffolk West (Eastern Counties Dairy Institute and Agricultural Department of Cambridge University).
 Surrey (South Eastern Agricultural College, Wye).
 Yorkshire North Riding (Agricultural Department of Leeds University).
 Montgomery (Agricultural Departments of University College of Wales, Aberystwyth, and University College of North Wales, Bangor).

6. In the following six counties the instruction is provided wholly by the Staff of a Central Institution, the name of which is shown in brackets :—

Isle of Ely (Agricultural Department of Cambridge University).
 Leicester (Midland Agricultural College, Kingston).
 Nottingham (Midland Agricultural College, Kingston).
 Sussex East (Agricultural College, Uckfield).
 Yorkshire East Riding (Agricultural Department of Leeds University).
 Yorkshire West Riding (Agricultural Department of Leeds University).

In the nine counties of Wales not already mentioned the work is carried on wholly by the Staff of a Central Institution, which is the Agricultural Department of University College of Wales, Aberystwyth, or of University College of North Wales, Bangor, or of both of these Colleges.

7. In the following four counties there do not appear to be definite arrangements for giving County Agricultural instruction :—

Lincoln (Holland).	Soke of Peterborough.
Rutland.	Sussex West.

8. It would thus appear that the great majority of counties have some separate Staff of their own and that the only grouping of counties is for the purpose of establishing or assisting to maintain a joint College or Institute or (more often) arises out of association with such a centre for Agriculture Education and Research. In the case of certain counties (*e.g.* Devon and Cornwall), no centre at present exists with which they could conveniently be associated. The independent Staff of the county is often supplemented, and their work often supervised, by the Staff of the centre with which the county is in association. It must be remembered, however, that hitherto there has been no adequate inducement to counties to combine for the purpose of maintaining an efficient Staff, and that if a sufficient grant were given by the Government for this purpose considerable changes might be made in smaller counties where the salaries at present offered are insufficient to secure first-rate men. In all the larger counties not already in combination it would probably still be found desirable for each county to have an efficient Staff of its own for the organisation of agricultural work not carried on at or in connection with the centre.

9. We consider that it may be laid down as a general principle that every county either should be associated, in combination with other counties, with an efficient centre, or, if not in combination, should have a *minimum* efficient Staff of its own. We think it desirable, especially in view of the difficulty of obtaining qualified teachers and organisers, to concentrate higher Agricultural Education, as far as possible, in a few really efficient centres. The particulars of Staffs provided by Agricultural Colleges are to be found in Appendix I. of the Report of the Board of Agriculture and Fisheries on the distribution of grants 1908-9 and 1909-10 (Cd. 5388).

10. Any County Council not associated with an efficient centre which finds itself unable or unwilling to establish a minimum Staff of its own should associate itself with the Council of an adjoining county.

The minimum Staff should be made up as follows :—

(a) *Agricultural Organiser and Adviser*, who should, as a rule, supervise the agricultural and horticultural work done by the county, and act as secretary to the Agricultural Education Committee or Sub-Committee.

He should be in close touch with the Head of any Centre with which the county is associated. He should (so far as his other duties may permit) give some instruction himself, but as a rule he would require competent instructors to assist him.

His main functions would be to get into touch with farmers and other agriculturists, and for this purpose to visit local markets and shows and farmers' clubs as well as individual farms and small holdings. He should also enlist the sympathy and help of agricultural associations. He would discuss, and advise agriculturists on, such questions as diseases in crops and animals, manures, cropping, insect pests, &c. He would distribute leaflets or pamphlets relating to rural work (such as those published by the Board of Agriculture), explain them and possibly make them a basis of discussion. He would organise and supervise illustrative experiments and demonstration plots. He would organise classes for instruction in farm labour subjects and prize competitions in connection with such subjects as hedging, ditching, thatching, &c.

After becoming thoroughly acquainted with the county, he would advise the Committee as to the establishment of permanent centres for agricultural instruction, such as Farm Institutes, Winter Schools, &c.

- (b) *Horticultural Instructor*, who should give courses of instruction at approved centres, carry out demonstrations on approved horticultural practice, give advice to small holders, allotment holders, cottagers, and others. He should have special charge of the work connected with school gardens and such nature study as may be connected with them. In counties in which Horticulture is of special importance it may be desirable that the Horticultural Instructor should be independent of the Agricultural Organiser. He should be in touch with any Centre of Horticultural Instruction with which the county is associated, and might, by arrangement, give some of the instruction therein.
- (c) In most counties a *Dairying Instructor* will also be required, who should conduct a fixed or migratory dairy school and give advice when required to farmers and others in dairy practice. In many counties separate instructors would be required to give instruction in the different branches of the dairy industry.

11. This *minimum* Staff would require to be supplemented by—

- (a) Competent scientific Investigators and Analysts, who would ordinarily be supplied by the centre with which the county is associated or from some University or Agricultural College.
- (b) Instructors in special branches of industry, *e.g.* Farriery and Veterinary Hygiene, Poultry and Bee-keeping, Cider-making, Hop-growing and such manual processes as Hedging, Thatching, Sheep-shearing, &c.

These practical Instructors would in most cases be regular members of the staff of the larger, or combined, counties, but in other cases (*e.g.*, manual processes) local experts might more conveniently be employed as required.

- (c) Instructor in Forestry, who should be supplied from one of the recognised Forestry Centres.
- (d) Organisers and Instructors in the Economics of Agriculture, *e.g.* Co-operation and Credit Banks for occupiers of land, the grading and marketing of produce, insurance of stock, &c. These would ordinarily be required to cover larger areas than counties, and might be supplied through a central body, such as the Agricultural Organisation Society, subsidised by the Government or by the County Councils employing the Instructors.

12. The qualifications of the Officials mentioned in the paragraphs above should, as a rule, be as follows :—

- (1) *Agricultural Organiser and Adviser.*

Qualifications.—(a) Thorough acquaintance with the practice of Agriculture such as would be obtained by some years' residence on a farm or farms, and active participation in agricultural processes.

- (b) A three years' course of Agricultural study and Laboratory practice at one or more Universities or Agricultural Colleges.

- (c) Experience in lecturing and in the conduct of Field Experiments, with pasture and arable.

We recognise that it is at present difficult to get men possessing these qualifications with so long a training, but we believe that the demand will gradually increase the supply.

(2) *Horticultural Instructor.*

Qualifications.—(a) Some years' experience in the practice of Horticulture, including Fruit-growing.

(b) Thorough training in the scientific principles of Horticulture such as is obtained at an approved Institution.

(c) Experience in lecturing and demonstrating to rural audiences.

(3) *Dairying Instructor.*

Qualifications.—(a) Thorough training in Dairy Science, with a minimum of a year's special training in Dairy Practice, at an approved Institution.

(b) Practical acquaintance with the processes of Milking and of Butter and Cheese making on a farm or in a factory.

(c) Experience in teaching and demonstrating.

(4) *Poultry Instructor.*

Qualifications.—(a) A thorough training in the theoretical and practical sides of the subject after at least a six months' course at an approved Institution.

(b) At least 12 months' practical work on a poultry farm.

(c) Experience in teaching and demonstrating.

(5) *Special Instructors* in Veterinary Hygiene, Farriery, Bee-keeping, Cider-making, Hop-growing, Manual Processes, &c.

With regard to the other Instructors mentioned in the above paragraph, we do not think it necessary to define their qualifications further than that they should be required to produce evidence of a thorough knowledge of their subject, and of capacity to impart instruction.

13. We do not consider it possible, without consulting the various County Councils, to prescribe in detail the proper Staff for individual counties. It may however be of service to set out the Staff actually provided in some typical counties of varying size and agricultural character. We have done this in the Appendix to this Report.

14. Although perhaps not strictly within the terms of our reference, we think it of vital importance that the Agricultural Staff of a county should work under a special Committee or Sub-Committee of the County Council in accordance with the recommendation of the Departmental Committee on Agricultural Education as contained in paragraph 117 of their Report.

The paragraph runs as follows :—

“Each county may be left to adopt the system best suited to its own requirements, but the Committee would lay stress on the expediency of there being in every county a special Committee, or its equivalent, to organise and supervise Agricultural Education. It is, moreover, essential that in order to gain the confidence of the farming classes any such special Committee should include a large proportion of members engaged, or directly interested, in agriculture or its allied industries.”

In Somerset and Wiltshire the Agricultural Instruction Committee is independent of the Education Committee for the county.

Cumberland and Westmorland have a joint Agricultural Education Committee for the two counties.

The three Ridings of Yorkshire have a joint Agricultural Education Committee for the three Ridings.

In the other counties of England Agricultural Education is supervised by the Education Committee, but in the majority of these counties the work is practically entrusted to a Sub-Committee of the Education Committee.

In Wales there is a separate Agricultural Education Committee in Montgomeryshire. In Anglesey, Carnarvonshire, Denbighshire, and Flintshire the Agricultural Committee for the county consists of members elected by the County Councils and members elected by one or more of the University Colleges.

In the other counties the work is supervised by the Education Committee.

APPENDIX (*see* paragraph 13).*A.—Counties in which Agriculture (tillage) is the main occupation.*

BEDFORDSHIRE.

Area.	*Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
302,947 acres	181,858	443	3,341

Organising Instructor in Agriculture.
 Science Lecturer.
 Lecturer in Poultry-keeping and Bee-keeping.

Lecturer in Veterinary Hygiene.
 Lecturer in Horticulture.
 Instructor in Dairying.
 Assistant Instructor in Dairying.

This Staff is connected with the Agriculture Institute, Ridgmont, which is entirely supported by the county. With one or two exceptions the students come from Bedfordshire.

ESSEX.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
974,849 acres	1,022,289	1,957	7,338

Lecturer in Agriculture.
 Lecturer in Chemistry.
 Demonstrator in Chemistry.
 Analyst.
 Lecturer in Biology.

Assistant Lecturer in Biology.
 Lecturer in Horticulture.
 Dairying and Poultry Instructor.
 Assistant Dairying and Poultry Instructor.

This Staff, although provided by the county, works in connection with the County Technical Laboratories, Chelmsford, at which, with a few exceptions, the pupils come from Essex.

B.—Counties in which Dairying is the main occupation.

CHESHIRE.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
644,180 acres	650,464	919	11,098

Lecturer in Nature Study.
 Part-time Lecturer in Bee-keeping.

Part-time Lecturer in Farriery.
 Instructor in Dairying.

In addition to these, the county maintains the Staff of the Dairying Institute at Worleston (two instructors in dairying), and the Staff at Holmes Chapel Agricultural College, at which about six-sevenths of the pupils come from Cheshire. The Staff of the latter is as follows :—

Lecturers in Agriculture, Chemistry, Surveying, Biology, Horticulture, Veterinary Hygiene, Dairying and Poultry-keeping, and Building Construction.

* The population figures given are those of the estimated population up to the middle of 1910.

SOMERSET.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
1,034,102 acres	394,374	1,956	12,040

Secretary for Agricultural Education who also lectures in Agriculture.
Lecturer in Horticulture.
Lecturer in Poultry-keeping.
Two Instructors in Cheese-making.

Instructor in Butter-making.
Three Part-time Instructors in Bee-keeping.
Two Part-time Instructors in Manual Processes.

C.—Counties in which Pasturage and Stock-raising is the main occupation.

CUMBERLAND.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
973,086 acres	269,666	1,102	6,761

Agricultural Lecturer.
Horticultural Lecturer.

Two Dairying and Poultry Instructors.

The Staff is provided jointly in connection with Newton Rigg Farm School by this county and by Westmorland, Cumberland being responsible for about two-thirds of the cost. Field demonstrations are carried on at certain centres on behalf of the county by the Staff of Armstrong College.

WARWICKSHIRE.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
563,097 acres	389,416	859	6,237

Instructor in Agriculture.
Instructor in Horticulture.
Instructor in Dairying.

Part-time Instructor in Bee-keeping.
Part-time Instructor in Poultry-keeping.

The county maintains a Dairy School at Griff House, Nuneaton, of which the Instructor in Dairying is head.

D.—Counties in which a considerable area is Horticultural.

KENT.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
972,905 acres	1,052,019	2,062	9,050

Part-time Instructor in Horticulture.
Part-time Instructor in Poultry-keeping.

Part-time Instructor in Bee-keeping.
Whole-time Instructor in Basket work.

The county also joins with Surrey in maintaining the Staff at Wye College, in which it carries on lectures in Agriculture, Farriery, and Fruit Farming. Rather more than one-third of the Students at Wye College come from Kent. The Staff at the College act as occasional county lecturers.

WORCESTERSHIRE.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
473,328 acres -	411,265.	1,133	7,375

Instructor in Horticulture.

Assistant Instructor in Horticulture.

Instructor in Dairying.

Part-time Lecturer in Veterinary Hygiene.

Part-time Lecturer in Bee-keeping.

Part-time Lecturer in Poultry-keeping.

Instructor in Farriery.

E.—County in which the Farming is mixed.

LANCASHIRE.

Area.	Population.	Number of Agricultural Holdings.	
		Owned or mainly Owned.	Rented or mainly Rented.
1,089,255 acres -	1,751,449	1,841	17,718

Permanent County Staff:—

1. Organiser or Secretary of Agriculture, Horticulture, and Lecturer in Agriculture.
- †2. Lecturer in Agriculture.
- †3. Lecturer in Agriculture and Bacteriology.
4. Lecturer and Instructor in Horticulture.
5. Instructress in Dairying (at County Dairy School).
6. Assistant Instructress in Dairying (at County Dairy School).
7. Migratory Instructress in Dairying.
8. Migratory Instructor in Cheese-making (in season only).
9. Instructress in Poultry-keeping (at County Poultry School), also Migratory Instructress.
10. Assistant Instructress (at County Poultry School).
11. Migratory Milk-tester.

Staff giving part-time to Work:—

- | | |
|--|--------------------------------|
| †1. Lecturer in Chemistry. | †7. Lecturer in Mathematics. |
| †2. Lecturer in Agricultural Chemistry. | †8. Lecturer in English. |
| †3. Lecturer in Botany and Geology. | †9. Lecturer in Book-keeping. |
| †4. Lecturers in Veterinary Science. | †10. Instructor in Drawing. |
| †5. Lecturer in Engineering and Mechanics. | †11. Instructor in Woodwork. |
| †6. Lecturer in Physics. | 12. Instructor in Bee-keeping. |

† Forming the Staff of Agricultural Department of the Harris Institute, Preston.

29th November 1910.

HENRY HOBHOUSE,
(Chairman).

BOARD OF AGRICULTURE AND FISHERIES AND BOARD
OF EDUCATION.

R E P O R T

OF THE

RURAL EDUCATION CONFERENCE

ON THE

QUALIFICATION OF TEACHERS

OF

RURAL SUBJECTS.

Presented to Parliament by Command of His Majesty.



LONDON :

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RURAL EDUCATION CONFERENCE.

Report on the Qualification of Teachers of Rural Subjects.

1. The question which the Conference have considered was raised by Mr. Parlour (authorised by the North Eastern Agricultural Association) in the following motion :—

“To call attention to the lack of teachers properly qualified for giving instruction in rural subjects in the Elementary Schools, and the means which should be taken to raise the standard of efficiency in these subjects.”

The detailed consideration of the question was referred in the first instance to a Committee, under the chairmanship of Mr. A. W. Chapman, who held five meetings, and interviewed the witnesses whose names are given in Appendix I.

2. We have had first to consider what qualifications are desirable in teachers of rural Elementary Schools. In our opinion, the curriculum in rural schools should be less literary than it is at present, and with this object in view, it should be based upon the employment of manual processes as a method of education, though it should not be forgotten that the aim of practical instruction in the Elementary Schools should always be the general development of the faculties rather than specialised technical training. The teacher should be able to make all the school subjects real to the child by correlating them with such objects as it is familiar with outside the school, thus keeping it in touch with its environment and with what life means to it.

3. Remembering that, in most country districts, the children who have to be taught are rarely more than 13 years of age, and that the intelligence and natural aptitudes of children of this age can be developed most effectively by observation, nature study, and manual work, we consider that what is needed in their teachers is a broad general education allied with a familiarity and sympathy with country pursuits and character, a first-hand knowledge of plant, animal and insect life, a sufficient acquaintance with the sciences underlying rural industries to illustrate their lessons with facts or experiments, and a skill in the use of their hands which would enable them readily to teach such subjects as gardening, woodwork, and other forms of manual instruction. In our opinion it is a matter of considerable importance that this instruction should not only be part of the curriculum of the school, but should be given by regular members of the staff rather than by peripatetic teachers, so that the children may realise that it is not a special subject but a very important part of their ordinary teaching.

4. The question of the supply of teachers qualified to give suitable instruction in rural subjects has been under consideration for many years. The attention of the Board of Education was drawn to the matter 11 years ago by the Agricultural Education Committee, a body composed of individuals interested in both agriculture and education and presided over by Sir William Hart-Dyke.

The Agricultural Education Committee passed the following among other resolutions :—

(a) “That this Committee urges upon the Board of Education the importance of so modifying the curriculum of Training Colleges as to enable theoretical and practical instruction in subjects bearing on rural life to be given at them. The Committee would point out that many of the Training Colleges are already provided with large gardens which might well be used for the purposes of demonstration and experiment.”

(b) “The Committee also considers that third-year students at the various Training Colleges should be encouraged, if they desire it, to pass their third year at some agricultural institution, and with this object suggests that the Board of Education should communicate with the Principals of one or two Agricultural Colleges with the view of an experiment of this nature being tried.”

5. With a view to meeting the opinions thus expressed, the Board of Education appointed in 1901 a Departmental Committee under the Chairmanship of Mr. Henry Hobhouse to draw up two-year courses of instruction for students in Training Colleges and to consider the above-mentioned resolutions.

This Departmental Committee reported generally in favour of further differentiation and specialisation in the arrangements for the training of teachers. On the question of training for rural work they said: "Whatever facilities are afforded for specialisation, there will, we fear, be great difficulties in training teachers for the special work of country schools. Nearly all our witnesses were agreed as to the reluctance of students in Training Colleges to entertain the idea of being classed as country teachers. Many of them may ultimately take rural schools, but even these prefer, when young, to join the staff of a town school, with its prospects of higher salaries and greater social and intellectual opportunities. There will, however, always be some whom early associations or natural tastes or considerations of family or health will attract to the country; and for these it may be hoped that some of our provincial Training Colleges will, under a freer system, such as is now contemplated, provide a suitable course of instruction."

With reference to the first of the two suggestions of the Agricultural Education Committee, the Departmental Committee recommended that students training for the regular period of two years should be encouraged to include in their training one of various alternative special courses in addition to the ordinary course, and that one of these special courses should be a course in rural subjects (including elementary biology and gardening). A specimen syllabus for this optional course was included in the Committee's Report.

They also recommended the inclusion in the ordinary curriculum of (a) manual instruction in woodwork for men students, and (b) general elementary science, including nature study dealt with from a practical and experimental point of view and specially adapted to teachers.

The Departmental Committee further recorded their opinion that it would be quite practicable to give a certain number of picked teachers a third year's special course of training at certain of the Agricultural Colleges if proper financial arrangements could be made.

6. These suggestions were acted upon by the Board of Education. General elementary science and manual instruction were prescribed in a circular issued by the Board in 1901 as part of the ordinary curriculum for Training Colleges, and in the Training College Regulations for 1904 these subjects appeared and still continue to appear among the compulsory subjects for two-year students.

In 1906, among the optional courses which might be taken by two-year students was included an optional course in rural science on the same general lines as those recommended by the Departmental Committee.*

In 1907 the Board entered into communication with the authorities of the Wye Agricultural College and the Swanley Horticultural College, with a view to organising third-year courses at those Colleges for teachers who had been trained for two years and wished to specialise for a third year with a view to teaching in rural schools. As a result of preliminary inquiries the Board informed the College Authorities in each case that they were prepared to consider favourably an application for the recognition of the College as an institution for work of this kind. A general announcement was made in the Training College Regulations for 1908 that the Board were prepared to recognise for grants an approved third year's course in nature study, or agricultural or horticultural or allied subjects, suitable for teachers or intending teachers whose tastes or opportunities would probably lead them to take teaching posts in rural schools. The Swanley Horticultural College made a formal application for recognition and was approved by the Board for the purpose.*

7. Neither of these last two methods of encouraging training in rural subjects has so far been at all successful. The optional course in rural science was taken by nine students in the Chichester Training College during the two years 1906-8, and has not been offered for examination since then in that or any other College.* Inquiries have been received by the Board from time to time as to the courses for the third year which may be taken at Swanley or Wye, but no student has so far taken a third-year course at either of those Colleges.*

It is clear from the evidence which we have received that the main reasons why the optional course in rural science has not been successful are as follows:—

- (a) Young teachers look forward to obtaining a place in a town school because of the higher salaries and possibly greater social and intellectual attractions, and therefore do not wish to do anything which would lead to their being classed as country teachers†; and

* See Appendix II. (b).

† See Appendix II. (b) (d) (e) (f) (j).

- (b) The curriculum of the Training Colleges is, as a rule, too crowded to allow of rural science being taken in the two-years' course,* although there are instances in which provision has been made for instruction in such subjects either by sending selected students for a few weeks to an Agricultural College† or by lectures given by outside organisations.‡

It is also clear from our evidence that the failure of students to take a third year's course at Swanley or Wye is mainly due to the reason that directly students have been through the ordinary two-year's course at a Training College they are anxious to earn their living, and after they have begun to earn their living they are naturally disinclined to take another year's course of instruction at a College where, not only will they be earning nothing§ but even their expenses will not be wholly paid.

8. So far as we have been able to discover, the only real progress which has been made in qualifying teachers is due to the efforts of the Local Education Authorities themselves, many of whom have made provision for the special instruction of the teachers in their rural Elementary Schools by means of Evening, Saturday or Vacation classes, and in one case by means of a peripatetic instructor who visits the Elementary Schools. We find that the work done by Local Education Authorities varies considerably in extent, and ranges from the provision of a single course for a limited number of teachers to a systematic attempt to secure that all the teachers in rural schools shall have a three-weeks' course in two successive years at an Agricultural College. On the other hand, there are many counties in which no provision is made for any instruction of teachers in subjects bearing on the work of rural schools.

9. Notwithstanding the fact that there is ample evidence to show that rural teachers, while they require guidance and encouragement, are as a rule ready to avail themselves of opportunities for improving their qualifications,|| so far as we have been able to gather from the evidence which we have received there is consequently, in spite of what has been done by Local Education Authorities, still a considerable lack of teachers suitably qualified to give instruction in rural subjects or to adopt methods of teaching based upon a knowledge of manual processes.¶

10. Whatever efforts may be made by the Local Education Authorities to train existing teachers, it is certain that many teachers, especially the older ones, will be averse to adopting new methods of instruction and disinclined to give prominence to rural subjects in their schools. It is therefore of vital importance to secure as many suitable teachers as possible from among the rising generation.

11. With this object, county Local Education Authorities should be urged to select a large proportion of their pupil-teachers and bursars from country-bred rather than town-bred boys and girls. This can only be done by a judicious distribution of their scholarships without too rigid a regard to purely competitive examinations.

12. The next step is to secure a suitable early training for these intending teachers. Secondary Schools equipped and staffed to meet rural requirements are an essential feature in turning out really effective rural teachers. Such Secondary Schools would be the very best preliminary training ground for rural teachers. The lessons of simple nature study in the Elementary School garden will be continued and developed by the higher scientific and manual instruction of the Secondary School. Such training would secure continuity in the future development of the teacher's mental and practical fitness for the work, quickness in appreciation and assimilation of the specialised courses provided later on, which, without such careful grounding, may result in a mere smattering of knowledge. We are glad to learn that in at least one county a scheme is under consideration for giving pupil-teachers and bursars while they are at a Secondary School some special instruction in theoretical and practical rural science, including the cultivation of allotments and gardens and practical bee-keeping.

Such training should be specially recognised by the Board of Education in the ordinary examination of persons intending to become teachers.

13. In our opinion there are several ways in which the difficulty in connection with increasing the supply of teachers properly qualified to give instruction in rural schools might gradually be overcome :—

- (1) The Training College course might be extended for all students to, at any rate, three years, so as to allow of their acquiring the special knowledge

* See Appendix II. (e) (f) (g).

† See Appendix II. (b).

‡ See Appendix II. (m).

§ See Appendix II. (h).

|| See Appendix II. (d) (g) (h).

¶ See Appendix II. (a) (d) (g) (h) (i) (k) (l).

necessary in the third year. This third year need not necessarily be consecutive with the first two years.

- (2) Special courses in rural subjects might be included in the curriculum for bursars and other intending teachers at rural Secondary Schools. In many cases such courses would be equally beneficial to all the pupils in the school.
- (3) Local Education Authorities might be encouraged to provide systematic courses of instruction of a suitable character through which as many as possible of the teachers in rural Elementary Schools might be passed. Such courses would be held most conveniently, under the supervision of the county staff teachers referred to in the first Report of the Conference, on Saturdays, lasting over a period of two years, and in conjunction with these Saturday courses further courses of two or three months' duration might be arranged at an Agricultural or Horticultural College or Farm School, the places of the teachers being filled temporarily while they were undergoing this further training.
- (4) The pay of teachers in rural schools might be brought up to a level more nearly approaching that which obtains in the towns, and greater opportunities of promotion than they at present enjoy might be given to them. If this were not feasible, special remuneration should be given by Local Education Authorities to specially qualified rural teachers.

14. From the evidence which we have received we are convinced that it is not at present possible for county Education Authorities generally to undertake the responsibilities referred to above to any large extent for financial reasons, and because of the feeling prevalent among ratepayers that the training of teachers is a national question rather than one for each county to undertake for itself.*

We therefore recommend—

- (1) that the length of the ordinary Training College course should be extended by one year, during which teachers would be able to specialise. This third year need not necessarily be consecutive with the first two years, and those teachers who desire to take up rural subjects during this period might be allowed to do so at University or Agricultural or Horticultural Colleges or Farm Institutes.
- (2) that all county Local Education Authorities should be required to provide for their existing teachers, or for such future teachers as have not attended a Training College, Evening, Saturday or Vacation classes, and, in connection with these classes, courses of two or three months' duration at an Agricultural or Horticultural College or Farm Institute where the teachers would receive free instruction and their ordinary pay.
- (3) that local Education Authorities should encourage rural teachers, both head teachers and assistants, by assimilating their pay more nearly to that obtaining in the towns.
- (4) that the curriculum of rural Secondary Schools should be modified to include special courses in rural subjects for bursars and other intending rural teachers.
- (5) that increased grants should be given by the Treasury to county Local Education Authorities to enable them to carry out the suggestions which we have made in (2) and (3) of this paragraph.

15. Summaries of the evidence which we have received are contained in Appendix II. to this Report.

26th May 1911.

HENRY HOBHOUSE,
Chairman.

* See Appendix II. (c) (j) (k) (l).

APPENDIX I.

LIST OF WITNESSES.

The following witnesses were interviewed by the Committee :—

1. Mr. J. W. E. HENNESEY, one of H.M. Inspectors in the Technological Branch of the Board of Education.
2. Mr. R. J. G. MAYOR, one of the Assistant Secretaries of the Board of Education.
3. Mr. RAMSEY NARES, Clerk to the Surrey Education Committee.
4. Dr. LLOYD SNAPE, Secretary to the Lancashire Education Committee.
5. The Reverend T. WARD, Principal of Peterborough Training College.
6. Mr. R. L. TREBLE, Vice-Principal of Culham Training College.
7. Mr. E. M. KENNEY-HERBERT, formerly one of H.M. Inspectors of Schools.
8. Mr. M. J. R. DUNSTAN, Principal of South Eastern Agricultural College, Wye.
9. Mr. J. BICKERSTETH, Secretary to the Yorkshire (East Riding) Education Committee.
10. Mr. MAUDSON GRANT, Secretary to the Lincolnshire (Lindsey) Education Committee.
11. Mr. P. ELFORD, Secretary to the Oxfordshire Education Committee.
12. Mr. H. G. WILLINK, Chairman of the Berkshire Education Committee.
13. The Reverend D. H. S. CRANAGE, Secretary for Lectures to the University of Cambridge Local Examinations and Lectures Syndicate.

APPENDIX II.

SUMMARIES OF EVIDENCE.

(a) Mr. J. W. E. Hennesey.

Witness thought there was undoubtedly a shortage of teachers qualified to give instruction in Rural Evening Schools. Many of the teachers now employed had not received any training in rural subjects or had not gone far enough with such training. He thought that one of the main reasons for the shortage was a lack of opportunity in many counties for receiving special training. Three or four counties in the south-west of England with which he was specially acquainted had done nothing towards training teachers in rural subjects. There was naturally a deficiency of rural subjects taught in the Evening Schools in these counties. Some counties, however, held two or three courses for training teachers which were well attended and really appreciated, and all counties could not do better than imitate the progressive ones. Teachers might be trained by attending (a) Evening Schools; (b) Saturday Classes; and (c) Vacation Classes. He would like to see all three types in every county. The courses which he had already referred to were, in some cases, attended by urban as well as rural teachers, but the practice varied considerably and depended on where the classes were held. Witness had no definite information as to the numbers of

teachers in Rural Evening Schools who had been born and bred in the country, but emphasised the importance of teachers being familiar with rural conditions. Now and then he came across a teacher who was a farmer's son, and there were teachers who were well trained in nature study, poultry-keeping and bee-keeping, and similar subjects.

With regard to courses at Training Colleges, witness thought that the rural science course was quite suitable and satisfactory for its purpose. With regard to the suggestion that there should be a third year in Training Colleges for rural teachers, he considered that a course at an Agricultural or Horticultural College, taken after the teacher had passed through the ordinary two-year Training College course, would be more suitable, and that it should last not less than a year. He had no reasons to offer why more had not been done in this direction.

In answer to supplementary questions, witness said that where rural subjects were well taught in day schools, children readily went to evening schools in similar subjects after they had left the day schools. For instance, instruction in gardening in the day school helped evening schools in gardening. In rural districts, it was often difficult to get students to go to evening schools for ordinary classwork, but they would readily do so for rural subjects if there was a good teacher. Witness handed in a list of Saturday courses for teachers in the district with which he was most familiar, which were conducted by persons with special agricultural or horticultural knowledge.

(b) Mr. R. J. G. Mayor.

1. Witness referred to the Departmental Committee of 1901 on courses of instruction in Training Colleges and to the resolutions passed by the Agricultural Education Committee which were referred to them. These were :—

“(a) That this Committee urges upon the Board of Education the importance of so modifying the curriculum of Training Colleges as to enable theoretical and practical instruction in subjects bearing upon rural life to be given at them. The Committee would point out that many of the Training Colleges are already provided with large gardens which might well be used for the purposes of demonstration and experiment.

(b) The Committee also considers that third-year students at the various Training Colleges should be encouraged, if they desire it, to pass their third year at some agricultural institution, and with this object suggests that the Board of Education should communicate with the Principals of one or two Agricultural Colleges with the view of an experiment of this nature being tried.”

2. Among the witnesses who gave evidence before the Departmental Committee was Mr. A. D. Hall, then Principal of the Wye Agricultural College. Mr. Hall wished to see arrangements made by which teachers who had completed the two ordinary years' course of training would be enabled to attend for a course covering not less than nine months at an Agricultural or Horticultural College, such as the Wye College for Men, or the Swanley College for Women. He thought that a course of this length would be of far more value than the short summer courses at present given, and that this course ought to be additional to the present Training College Course and not included in it. Mr. W. Somerville, then Professor of Agriculture at Cambridge, gave evidence to the same effect.

3. The Committee reported generally in favour of further differentiation and specialisation in the arrangements for the training of teachers. On the question of training for rural work they said : “ Whatever facilities are afforded for specialisation, “ there will, we fear, be great difficulties in training teachers for the special work of “ country schools. Nearly all our witnesses were agreed as to the reluctance of “ students in Training Colleges to entertain the idea of being classed as country “ teachers. Many of them may ultimately take rural schools, but even these prefer, “ when young, to join the staff of a town school, with its prospect of higher salaries “ and greater social and intellectual opportunities. There will, however, always be “ some whom early associations or natural tastes or considerations of family or health “ will attract to the country ; and for these it may be hoped that some of our

“ provincial Training Colleges will, under a freer system, such as is now contemplated, provide a suitable course of instruction.”

(a) With reference to the first of the two suggestions of the Agricultural Committee, the Departmental Committee recommended that students training for the regular period of two years should be encouraged to include in their training one of various alternative special courses in addition to the ordinary course, and that one of these special courses should be a course in rural subjects (including Elementary Biology and Gardening). A specimen syllabus for this optional course was included in the Committee's Report.

(b) The Committee further reported as follows :—

“ As regards the second of the suggestions of the Agricultural Education Committee which have been referred for our consideration, we consider that it would be quite practicable to give a certain number of picked teachers a third year's special course of training at certain of the Agricultural Colleges, if proper financial arrangements could be made. Mr. Hall, the Principal of the Wye College, has discussed the subject with us, and we are persuaded that study in an Agricultural College under a sympathetic Principal having special knowledge of the requirements of teachers would be of the very greatest value to those qualified to teach in rural districts, especially if associated with practice in the local Schools. Such a plan would certainly afford a better equipment than that obtained at present by Elementary Teachers at the Summer or Saturday courses provided by various County Councils. It would probably be sufficient to devote six months, say, from March to September, to such a course, but nine months would undoubtedly be preferable. We fear, however, that very few teachers would be able to take advantage of such a course unless liberal grants were made towards their expenses. The College charge for a nine months' course would be about 25*l.* for instruction, and 70*l.* including board and maintenance. We would suggest that grants might be made to teachers who spend their third year at such Colleges on the analogy of the grants now given for those teachers who spend a third year in a foreign country.”

4. Both these suggestions have been acted on by the Board.

(a) In their Regulations for 1906 the Board included among the optional courses which might be taken by two-year students in Training Colleges an optional course in Rural Science on the same general lines as those recommended by the Departmental Committee.

(b) In 1907 the Board entered into communication with the authorities of the Wye Agricultural College and the Swanley Agricultural College with a view to organising third-year courses at those Colleges for teachers who had been trained for two years and wished to specialise for a third year with a view to teaching in Rural Schools. As a result of preliminary inquiries the Board informed the College authorities in each case that they were prepared to consider favourably an application for the recognition of the College as an Institution for work of this kind. A general announcement was made in the Training College Regulations for 1908 that the Board were prepared to recognise for grants an approved third year's course in Nature Study, or Agricultural or Horticultural or allied subjects, suitable for teachers or intending teachers whose tastes or opportunities would probably lead them to take teaching posts in rural Schools. The Swanley Horticultural College made a formal application for recognition, and was approved by the Board for the purpose.

5. Neither of these alternative methods of encouraging training in rural subjects can be said so far to have been successful. The optional course in Rural Science was taken by nine students in the Chichester Training College during the two years 1906-8, but was then discontinued, owing, it is understood, to the difficulty for finding time for it. It has since been introduced at another College, Bishop's Stortford, but no examination in the subject has yet been held at that College. Inquiries have been received by the Board from time to time as to the courses for the third year which may be taken at Swanley or Wye, but no student has so far taken a third-year course at either of those Colleges.

6. The main reason for this failure is no doubt the difficulty mentioned by the Committee of 1901, that young teachers look forward to obtaining a place in a town School, because of the higher salaries and possibly greater social attractions, and therefore do not wish to do anything that would lead to their being classed as country teachers. A table is attached which shows that the average salaries for all classes of teachers in county areas are below those in any type of urban area. Thus a teacher who is able to specialise, either through superior ability or through being able to give

more time to continue his training, will be tempted to specialise in any direction rather than that of preparing himself for work in rural School. The facts as to the nine students at Chichester who took the Rural Science course will illustrate this. Of these students, seven passed a satisfactory examination in their special course, and two failed. Four of the seven who passed are now teaching in town Schools, and their average salary is 91*l*. The two who failed went to town Schools, and their average salary is 81*l*. Three of those who passed went to country Schools, and their average salary is 68*l*. Thus the three who passed satisfactorily through a course qualifying for rural work and went to country Schools are getting on the average 13*l*. less than the two who failed to do so and went to town Schools. Detailed particulars were handed in by witness.

7. One of the reasons which prevents students availing themselves of the possible third year at Swanley or Wye is no doubt the expense of the course. The fee for a year's work at Wye would apparently be from about 70*l*. to 100*l*., and the Board's grant towards this would be 53*l*. The fee at Swanley is 80*l*., and the Board's grant towards this would be 38*l*. The grants which the Board have offered for this purpose are as high, however, as the grants which they have made for a student taking a third year abroad, or a third year at a University, and the total cost of living in either of these cases may be as high as or higher than the cost of a year at Swanley or Wye. The cost of education at the Oxford or Cambridge University Training Colleges is certainly higher, yet from 30 to 40 students every year are willing to enter for a three years' course at these two Colleges. A student going even to one of the less expensive Universities, such as Manchester, Liverpool, or Birmingham, would probably have had to spend as much money in excess of the Board's grant for each of the three years as a student going to Swanley or Wye for a year would have to spend for that one year. But plenty of students are willing to enter for the University courses, because the inducements in the way of additional salary and prospects that are open to University graduates make it worth their while to do so.

8. Thus the difficulty seems very largely to turn on the question of salaries. At any rate, unless better prospects in the way of salaries are opened to teachers in rural Schools, it does not seem likely that many teachers who are able to continue their training for a third year will take it at an institution preparing for rural work, since all these teachers will probably look forward to getting posts in town Schools. On the other hand, a large number of the two-year students may be expected to take places in rural Schools, and in their case, therefore, the difficulty of giving a rural bias to the training should be less serious. In this case the difficulty arises probably not so much from the disinclination of particular students to take a rural course, as from the disinclination of a particular College to get a reputation for preparing students for rural work only. This difficulty may be hard to overcome in the case of the older non-local Training Colleges. But it might be more possible to arrange for a course of training with a definite bearing on rural subjects in those Colleges which are now being provided by County Councils for rural areas. Hereford, which was the first County Council to provide a Training College, has so far not attempted to organise a course giving special training for rural work. But the Cheshire County Training College at Crewe, which has recently been opened, is proposing to send a selected number of its men students for a three weeks' short course in agriculture to the Agricultural College at Holmes Chapel.

9. Asked whether the present arrangements for the training and preliminary education of intending teachers tended to select teachers from the towns rather than the country, witness thought that any system of selection in which external examinations were an important element must tend, to some extent, to favour pupils from the towns as opposed to pupils from the country districts, in view of the greater facilities for organised instruction in the towns. He suggested, however, that it might be hoped that the conditions now coming into force would be less unfavourable to rural children than the conditions of a few years ago. Under the system of a few years ago, intending teachers had little opportunity of carrying on their education, or qualifying for the necessary examinations, except by means of Pupil Teacher Centres which were mainly confined to the towns. Under the system now coming into force, however, the intending teacher would obtain his education in the Secondary School, and it might be hoped that Secondary School education would be accessible to an increasing extent to children in country districts. Asked whether special instruction in rural science could be given to intending teachers in Secondary Schools, witness thought that this must depend to the extent to which the Secondary School

provided a course with a rural bias for its pupils generally. The provision of a course in rural science for intending teachers only would run counter to the Board's general view, that intending teachers should receive the same education as other pupils until the end of their Secondary School life, and would probably be difficult to organise. The witness also thought it doubtful whether effective instruction in rural science could be given during the Student-Teacher year, in view of the small amount of time which the Student-Teacher could spare during that year for his own study.

AVERAGE SALARIES OF CERTIFICATED TEACHERS UNDER TYPES OF L.E.A.
ENGLAND, 1909-10.

Type of Area.	Men.		Women.	
	Head.	Assistant.	Head.	Assistant.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Counties - - -	144 13 6	101 12 3	98 16 3	79 5 1
Boroughs - - -	201 6 4	114 10 4	125 2 0	86 7 1
Urban Districts - -	228 9 9	132 1 8	149 11 5	99 13 11
London - - -	277 1 11	153 15 11	200 8 5	113 0 6
County Boroughs - -	226 5 4	123 5 1	136 15 4	87 6 4
Total—England -	174 11 11	126 5 1	132 15 9	91 15 2

(c) Mr. Ramsey Nares.

Witness stated that he was of opinion that in Surrey there was no shortage of suitable teachers for rural elementary schools. On the other hand, there was a large number of good teachers suitable for schools in their rural districts. There exist in Surrey at the present time 159 purely rural schools, of these 109 have school gardens, and there is in each school at least one, and in many two, teachers on the staff qualified to give suitable instruction in rural subjects. Surrey is not much affected by the problem of the head mistress, there being very few schools without a head master.

The witness then described the steps taken by the Surrey L.E.A. to fit their teachers to teach in rural schools. Since 1895 the county had sent over 200 men teachers to attend a two weeks' vacation course held at the Agricultural College at Wye, in Kent, which Surrey assisted to establish and continues to support with the assistance of the Kent County Council. The full course lasts three years. The Surrey County Council sends 30 teachers each year, 10 of whom would be attending for the first time. There is great competition among teachers to attend these courses. The Council pays 5*l.* per head, the fee for the course charged by the College, and an average of 2*l.* each for travelling expenses.

From 1892 to 1895, prior to the establishment of Wye College, a number of teachers were sent to Special Holiday Courses at Oxford or Cambridge.

In the same way 15 women teachers each year attend the Horticultural College, Swanley, for a course of nearly three weeks. The full course lasts three years. The County Council pays fees, board, and travelling expenses.

Witness also described the Saturday and evening courses of lectures for teachers which have been held since 1898 by the County Horticultural Instructor at various centres in the county. These have been largely attended, as have the rural excursion for teachers, conducted on Saturdays by the same instructor.

On one occasion 300 teachers, under the supervision of the County Instructor, visited the Royal Horticultural Society's School of Horticulture at Wisley. The teachers pay their own travelling expenses incurred in connection with these excursions, the County providing the instructor.

The witness also referred to the Surrey Scheme of Horticultural Scholarships for boys from Elementary Schools tenable at Wisley for three years, and regretted that

this could not be recognised as a qualification for a rural teacher owing to the absence of any training in ordinary subjects.

In reply to questions by the Chairman and supplementary questions afterwards from other Members of the Committee, Mr. Nares said that one reason why rural teachers in his county had taken such advantage of the facilities above described was that, apart from love of the subject when once an interest in it has been aroused, they knew that in the event of any vacancy occurring in a rural school the L.E.A. would give preference to teachers who had been through the various courses. As a matter of fact, a note was kept of the teachers who had passed through these courses or had obtained diplomas from the Royal Horticultural Society or other bodies, and no teacher would be appointed to the head mastership of a provided rural school who did not possess proper qualifications. Questioned as to how this could be done in the case of "non-provided" schools, witness explained that under their promotion scheme the managers are supplied with a list of persons whose appointment the L.E.A. would recommend as suitable, and in practice these recommendations materially influence the managers' choice.

No difference is made between the pay of rural and urban assistant teachers. The scale in force in Surrey is :—

	Maximum Salary.			
	£			
Trained certificated teacher	-	-	-	130
Certificated teacher	-	-	-	120

The witness admitted that this scale is above that obtaining in most other rural countries, but this was owing to proximity of Surrey to London; Surrey was almost metropolitan.

Head teachers' salaries were graded according to the size of the school, and would be less in the country than in the town. Witness was of opinion, however, that this would not have any effect on the question of obtaining suitable teachers for rural schools. If assistant teachers were attracted to the country by the offer of a salary equal to that which they would get in the town, and they were properly trained in rural subjects, the law of supply and demand may be left to settle the difficulty of head teacherships.

Witness was of opinion that Surrey provided sufficient and suitable training for rural teachers. The county suffered, however, in attaining a complete system through possessing no central Farm School.

He did not think that Training Colleges could be utilised for giving special instruction to teachers in rural subjects. Not only was the Training College too "booky," but students at a College could have no facilities for gaining a practical experience or learning the actualities of rural life. Moreover, candidates for the teaching profession were unwilling to be earmarked at the outset of their career as future rural teachers. The reason for this is that the prizes of the profession are to be found in the town. He was of opinion that for these reasons means could not easily be found for giving teachers special instruction in rural subjects before they were appointed to a rural school. As regards the third year's training at an Agricultural College, he did not see how teachers could be expected to sacrifice a year's salary to attend such a course, with no prospect of deriving special financial advantage after the end of the course.

In reply to a question as to how rural Education Authorities can get a supply of suitably trained teachers if they are not turned out from the Training Colleges "ready made," the witness stated that, in his opinion, the only method is to get the young teachers as assistants into the country, and when once imbued with country tastes and interests, to offer them facilities for becoming qualified in rural subjects, and in course of time to become the head teachers of rural schools. This must be done by gradual process extending over a number of years, as in Surrey, where, after 18 years' work, there was an ample supply of suitable teachers.

Questioned as to the possibility of giving teachers leave of absence for several months to attend an agricultural college, witness stated that such a system would necessarily be very expensive, as a Local Authority would probably have to pay the teachers' salary, or maintenance grant in lieu thereof, as well as the salary of his deputy during the time he was attending the course. Should such post-College courses be started, he thought that the Board of Education grants should not be less

than the amount offered for the third year's course in a Training College, and they ought to be a great deal more. For teachers from Surrey a course of from six to nine months would be sufficient.

Witness stated that the present system of training teachers was an important factor in the problem the Committee were investigating. At present a student from a country school would have to go into the town to attend a secondary school and from there to a training college, probably also situated in the town. Thus by the time a teacher had passed through the college he had spent several of the most impressionable years of his life in the town and was averse to going back to the country unless obliged to do so. For the purpose of this inquiry, witness had sent a circular letter to the rural teachers in his county asking for information as to whether their experience had been in the country or in the town. From the replies he had received it appeared that 888 teachers had country experience only (47 per cent.); 661 had town experience only (35 per cent.); and 340 had both town and country experience (18 per cent.).

Questioned as to whether teachers possessing special qualifications should receive special rates of pay, witness stated that he was of opinion that an adequate knowledge of rural subjects should be regarded as an essential qualification in a rural teacher and should not be paid for specially. In Surrey teachers knew that they would not be considered eligible for promotion unless they had secured such qualifications.

In reply to supplementary question, witness said that he thought the teaching in elementary schools in rural districts had greatly improved in recent years. Centralised upper schools would help to solve the difficulty of providing suitable teachers, because at the central school specialised instruction by expert teachers could be given. He did not object to providing special courses for rural teachers in training colleges, if such were possible and adequate, but he thought that teachers would not be willing to be "earmarked" as rural teachers. In reply to questions as to school gardens, he explained that school gardens were not used for turning out gardeners, and that the practical work in the garden was always correlated with the literary work in the classroom.

(d) Dr. Snape.

Witness could not say to what extent there was a shortage of suitable teachers for Rural Elementary Schools. Probably few of the existing teachers had had the ideal form of training to fit them for conducting rural schools. Within recent years, many had made great efforts to qualify themselves to give instruction having a closer connection with matters with which the children were in daily contact outside the School, and had eagerly availed themselves of any opportunities afforded them, as by Saturday Classes, in this direction. In Lancashire nearly 44 per cent. of the Schools (312 out of 710) were within areas not governed by any Urban District Council. Witness considered that the steps which should be taken to give special training for rural teachers were (a) special training in Third Year at a Training College provided with garden and grounds for Nature Study and if possible a Home Farm, or, as an alternative, at an Agricultural College or Farm School; (b) more general provision for manual instruction, nature study, and (for girls) cookery, when a future teacher was a Pupil-Teacher, Bursar, or Student-Teacher; (c) Evening, Saturday, or Vacation Courses for Teachers. The qualifications required in rural teachers were primarily a real and keen interest in rural life and pursuits, and a capacity and desire to bring the ordinary work of the school into more intimate association with the environment of the pupils. He did not think that it was desirable to give a more technical character to the education of children in the Public Elementary School, especially as so many left at the age of 13. In Lancashire, classes in gardening for teachers had been held for four Winter sessions at various centres on Friday evenings and Saturday mornings. They were conducted by the County Horticultural Instructor, and the travelling expenses of those teachers who made 85 per cent. of the possible attendances were paid by the Education Committee. Over 200 teachers had been through these classes.

Witness thought it most desirable that instruction to teachers should be given at a place where there were facilities for practical work and continuous observation of agricultural processes and natural phenomena, but it should depend upon local considerations and convenience whether the instruction should take place at Agricultural Colleges and Farm Schools or at one or two centres in the County. The

Lancashire Education Committee had granted a certificate to those teachers who had attended and made satisfactory progress in the courses in gardening, and witness considered that there was need for a good external certificate. He did not consider it desirable that special rates of salary should be given to teachers possessing special rural qualifications, as, ideally, it would be better to expect that every teacher should be capable and willing to carry out such instruction as was most suitable for his particular school. It might, however, be advisable to offer acting teachers some inducement to make the necessary effort to qualify themselves, and indeed the Lancashire Authority made special allowances in the case of each school garden for the remuneration of the teacher.

Witness thought that the comparatively small salaries paid to Head Teachers of rural schools was the root difficulty in dealing with the problem which the Committee was investigating. It was natural that teachers sought posts from which they could obtain the highest salary possible, and these were usually in the towns. The Local Education Authority, faced with the fact that the cost of staffing is large compared to the number of children in average attendance in the country, could not pay higher salaries for such schools. Possibly an improvement might be effected by increasing the Government grants to small rural schools, which would enable the Local Authority to raise the salaries of the Head Teachers, thereby making their position a more natural object of ambition, and affording a greater inducement to special preparation for such positions.

Witness considered that the methods adopted in recent years for the preliminary education of teachers had resulted in the supply of a better educated teacher, but inasmuch as a Pupil-Teacher, Bursar, or Student-Teacher had to be within convenient reach of a Pupil-Teacher Centre or Secondary School, the new system of training had the effect of considerably diminishing the number of these young teachers in connection with rural schools. In the 312 rural schools under the Lancashire Authority, there were only 23 student-teachers and 20 pupil-teachers*; whereas in 1903 there were 141 pupil-teachers. Rural children also have more difficulty in gaining County Junior Exhibitions, which enable them to obtain a Secondary School education and prepare for a Bursarship. The Lancashire Authority had endeavoured to meet this by earmarking a number of the County Junior Exhibitions for each district in the county area.

Witness furnished particulars of 124 Schools in Lancashire north of the Ribble, showing the numbers of teachers born and bred in the country. The results were as follows:—

Head Teachers born and bred in Country	-	-	75	60·5 per cent.
Do. do. Town	-	-	49	39·5 "
Certificated Assistants born and bred in Country	-	-	13	48·1 "
Do. do. Town	-	-	14	51·9 "
Uncertificated Assistants born and bred in Country	-	-	71	60·7 "
Do. do. Town	-	-	46	39·3 "
Supplementary Teachers born and bred in Country	-	-	44	81·5 "
Do. do. Town	-	-	10	18·5 "
Total	-	-	-	<u>322</u>

In the aggregate—

Born and bred in the Country	-	-	-	63 per cent.
Do. do. Town	-	-	-	37 "

Witness stated that figures show that the great majority of those who seek positions in rural schools are those whose earliest year predisposed them to interest in country life. It should not, however, be forgotten, that teachers who have once become connected with rural schools find it very difficult to secure promotion to the larger urban schools, and hence it must not be concluded that the large proportion of country-bred teachers who are in our rural schools are remaining there by choice.

* It should, perhaps, be added that there are also some rural children amongst the Bursars educated in neighbouring urban Secondary Schools.

(e) Rev. T. Ward.

In reply to questions from the Chairman, witness stated that about two-thirds of the students at his College were country bred, and about the same number came from secondary schools in rural districts. As regards the curriculum of the College, no arrangements were made for giving special training to students who would become teachers in rural schools. Some years ago agriculture was taught at the College, but was discontinued. In one year rural subjects were taken up, but had not since been applied for, as the other subjects appeared to have suffered. There has been no serious modification in the curriculum in recent years with the view of giving it a more rural bias. The witness said that the greatest ignorance of gardening was shown by most of the students, and suggested that more stress should be laid on this subject in the regulations of the Board of Education. He thought that students should be given the option of taking either gardening or woodwork.

Questioned as to the reasons why, in his opinion, the third year's course at an Agricultural College had not been applied for, witness pointed out that the number of students who took a third year's course in any subject was very few. He did not think that the fact that no student had applied to go to an Agricultural College should be regarded as extremely disappointing. If there is in the future a strong demand for teachers qualified to give instruction in rural subjects, the supply will be forthcoming, but up to the present no such demand has existed. The witness also referred to the low salaries paid in country schools, and to the fact that head mistresses were employed instead of head masters, with the result that students leaving a training college hoped to go to a town school rather than a country school.

In reply to supplementary questions Mr. Ward said that he did not think it was possible to add subjects to the curriculum of the training college at the present time. If further attention was to be given to rural subjects some modification would have to be made in the syllabus.

(f) Mr. R. L. Treble.

Witness stated that Culham Training College is situated in the country, but is not otherwise "rural" in character. Of the students at present attending the College, 36 per cent. were born and had lived in the country, and about 33 per cent. had come from rural Secondary Schools. At least 60 per cent. were not from the country. Questioned as to whether the curriculum at the College is satisfactory for training rural teachers, witness stated that he had consulted the Principal on this subject, and his opinion was that every student who had passed through the College was fit to teach in a rural School. Further questioned on this point, the witness said he was doubtful if teachers going straight from the College to a rural school would be properly qualified, they had not received sufficient practical training in teaching rural children.

In recent years the curriculum had been slightly modified, and nature study is receiving more attention than formerly.

Elementary science is given a special bias towards nature study. No student had applied for special instruction in rural subjects. Students choosing an optional course usually selected physics, not rural science. The curriculum is very crowded, and does not admit of additional subjects. The whole of the two years spent at a Training College is fully occupied, and is not required for the general training of the teacher.

Witness was of opinion that few of the students want to become rural teachers. They dislike doing anything to "brand" themselves as rural teachers. It was always possible for a teacher to go from the town to the country, but not easy to go from the country to the town. He thought the attractions to the town were of a personal character, and were principally the supposed dulness of country life, and the higher salary paid in the towns (the fact that the cost of living was less in the country would not appeal to a young teacher). A teacher would regard himself as a failure if he went to a country school.

In reply to supplementary questions, witness stated that outdoor field botany forms a large part of nature study, which subject does not lead up definitely to agriculture or horticulture. The staff at the College is mostly drawn from the town rather than the country.

Mr. Latham explained that the Council of his County frequently appointed teachers from the Culham Training College, and he desired the witness to ask the Principal of the College, in the event of teachers qualified to give instruction in rural subjects being required in the future, whether his College would be in a position to supply such teachers. Witness said he would be pleased to ask the Principal that question and forward his reply.

The following statement by the Principal was forwarded subsequently by the witness :—

“It is quite impossible for the College to specialise in rural subjects or, except in very exceptional cases, to give more instruction than is at present being given, so long as the present Training College curriculum is in force. The number of subjects is so large, the demands of Inspectors so stringent, and the general standard of education among students so low, that no special training is possible.”

(g) Mr. E. M. Kenney-Herbert.

Witness considered that, from the point of view of the Committee, there was a shortage of teachers capable of getting away from the ordinary lines of elementary teaching and launching out into new directions for teaching in rural schools. On the other hand, it was astonishing how many teachers could be brought to see the value of new methods of teaching, if they were suitably guided and encouraged. He regarded the Rural Elementary School as the backbone of the whole educational system, and considered that it should be served by the best teachers possible. The shortage of properly qualified teachers was due to the fact that so little had been done for them, and it was surprising that so much good work was done by the teachers, considering their isolation, the little encouragement they got, and the few opportunities there were for training them in a suitable direction. Witness referred to a joint conference which was held three or four years ago at Derby, at which some representatives from Derbyshire, Nottinghamshire, and one or two other counties considered what should be done for rural teachers. It was agreed that little was being done for the rank and file, and it might be a good plan to set up a special Training College for rural teachers at which teachers for several rural counties could be trained.

This idea received considerable support and was brought before the notice of the Board of Education. The principle of its desirability was largely admitted by educationalists, but the plan failed through the lack of funds and the difficulty in finding suitable practising schools at a convenient centre. Witness then referred to the policy which he had followed in Bucks. of establishing manual work in the schools, and connecting it where possible with rural pursuits. He stated that there was no school in Bucks. which did not undertake manual work of some kind, and that there were now about 100 gardening classes. He handed in some suggestions made by the Bucks. Local Education Authority for the connection of gardening and woodwork instruction. He said that the Local Authority was very keen on this idea of manual instruction, but there was the great difficulty before them of extending it without further funds; moreover, the grants for handicraft from the Board, limited as they were to certain forms of handwork, taught to certain children of a certain age, offer little or no encouragement. Bucks. has shown considerable enterprise by introducing simple forms of handwork to start with, and voting 200*l.* for the extension of the work. They also organised a large conference to consider rural education, and to display exhibits of the children's work as specimens of what might be done in rural schools, and he felt certain that, if they had more money at their command, the Local Education Authority would do much more for this type of work. After all, everything depended on the teachers; and they required sympathy and encouragement from three sources—(1) the Local Education Authority; (2) the Inspectors of the Board of Education; and (3) the Board of Education and the Treasury.

Some Saturday classes were started in Bucks. which teachers were invited to attend with the view of giving them some technical power of making things. This was enough to rouse their keenness, and the teachers learned from each other, from the Inspector, and even from the children as the work proceeded. Witness considered that the opportunities for obtaining qualifications to teach such subjects were insufficient as a whole. The matter needed to be attacked with enthusiasm, and there

must be classes which the teachers could attend. If only teachers in other counties had the same opportunities that they had in Bucks. the thin edge of the wedge would be deeply set.

Witness explained that some rural teachers had attended courses at Reading on their own account, and was of opinion that if the difficulty of supplying their places during their absence could be got over, teachers should be encouraged, and indeed helped, to go to classes at Agricultural Colleges where they should have opportunities for studying handicraft as well as agriculture. He was strongly of opinion that Certificates of Efficiency ought not to be encouraged. Teachers only got flustered and thought of Examinations if they had Certificates to aim at, but they might go out from the Summer course, or longer course at the College, with a voucher showing what courses they had attended and the ground that they had covered. He thought that it would be excellent if country teachers who could teach these rural subjects were paid at a higher rate for being able to do so, but the ratepayers of the country were difficult to persuade.

Witness referred to the recommendations of the Departmental Committee on Courses of Instruction in Training Colleges, of which he was a member, and stated that the main reasons that no very great result had come about were that (a) there was something in the Training Colleges which made for the idea that a person going to the country was branding himself; (b) the curriculum was overloaded, and there was not in Training Colleges a means of adequate differentiation; (c) the Training Colleges were far too academic. They were not even fulfilling their professional side, and had no time left for practical teaching.

Witness used to inspect Training Colleges, and had known of students complaining that they had to go to Practising Schools because it took them away from working for examinations. He considered that if young people came into the Training Colleges with reasonable qualifications, they ought to have such subjects as history and geography lightened, and that they ought to be brought more into line with their future lives as teachers in Elementary Schools. He suggested a plan by which the first four terms might be utilised in finishing the academic subjects, and that afterwards students should be concerned with the professional subjects and subjects which were of practical utility in the lives of the children they were going to teach, *e.g.*, domestic science, handicraft, gardening, &c.

Witness was in favour of teachers taking a special third year's course at an Agricultural College after their two years' course in the Training College, but stated that the difficulties were financial; but so far as students and the Training Colleges were concerned, he would like students to be able to take a third year's course at any time in their career, and not only immediately following their two years in the Training College. He thought that rural teachers would benefit by a whole year's course, as they would learn technical work and its application to the Elementary Schools and be able to give some thought to the means by which all the subjects in the Elementary Schools could be associated and worked together.

Witness stated that, in his experience, country-bred teachers were by far the best for rural schools; a teacher who had only experience of town life would find it difficult to take enthusiastically to the country. The present system of selection tended to get town children as teachers. The difficulties in the way of country children becoming teachers were largely those of locomotion, finance, and the provision of suitable practising schools in the country. His main suggestions were (a) that the Training College curriculum should be modified; (b) that Local Education Authorities should themselves take steps to give special training to rural teachers, and these steps should take the form of setting up Saturday Classes and encouraging teachers to go to Summer courses. He thought, too, that it would be of the greatest advantage if agricultural counties combined to establish a rural education Training College, as suggested at the beginning of his evidence. Such a College would have no stigma attached to it.

In answer to supplementary questions witness said that he was certain that as time went on the character of instruction given in the towns would be diametrically opposed to that given now. Education enabled the child to do three things: (1) to observe with his own eyes; (2) to use his own thoughts; and (3) to express himself in his own way. Learning by *doing* was a system which he would advocate for the Elementary Schools, and, though education in this direction was a very modern experiment, there was some evidence that it was developing successfully, though as yet little progress had been made in the country at large.

(h) Mr. M. J. R. Dunstan.

Witness explained that he had had a considerable experience of elementary school teachers as he had been responsible for the conduct of special courses for them both at Wye and at the Midland College, Kingston. The Chairman having read the reference, Mr. Dunstan said that in his opinion there is a shortage of capable teachers but no shortage of willing teachers. Questioned as to the number of teachers who should have received special training in rural subjects, he said that it was very necessary that the head teacher in every rural school should have this special qualification. If the head teacher was not in sympathy with, and had no knowledge of, rural life, an assistant teacher who was qualified to give instruction in rural subjects might not obtain that encouragement which would be necessary for him to create enthusiasm for the subject.

In conducting vacation courses, such as were held at Wye, he had found that the preliminary scientific training of the teachers was so slight that there was practically no foundation to build on. One teacher, who had specialised in magnetism and electricity at the training college, had never handled any apparatus and had never seen an experiment conducted. Out of the seventy teachers coming annually to Wye, seventy per cent., at least, had had no experience at all with apparatus. There were many interesting experiments which could be performed in an elementary school by means of simple apparatus if the teacher only had some experience in carrying out experiments. He had found that the teachers were very willing and anxious to learn but were greatly handicapped by their lack of previous scientific training. He had no experience of training colleges themselves, but judging purely by the results (*i.e.*, by the teachers he had come in contact with) he thought that far too much attention was devoted to book-work and the passing of examinations.

The fortnightly courses at Wye were successful in stimulating interest but were not long enough. Asked what length course he would suggest, Mr. Dunstan replied that six weeks at least were required, but it would not be reasonable to expect teachers to give up the whole of their summer holidays to attending such courses. Questioned as to what subjects he would teach in the six-weeks course, the witness said that he would not attempt to teach pure science; he would try to get each teacher to take up the subject he was specially interested in. One group might study botany and plant physiology; another, insect life; a third, the chemistry of everyday life; a fourth, the geology of the countryside, and so on. He thought it most important that children should be taught from objects in their natural surroundings. Teachers preferred teaching facts about geology, for instance, from specimens brought into the classroom, as they found that they might encounter serious difficulties when teaching in the fields.

Questioned as to the steps which should be taken to improve the present conditions, Mr. Dunstan suggested that the students in training colleges should be given "the skeleton" of scientific knowledge. The way science was taught in Training Colleges was very unsatisfactory at the present time. One member of the staff was expected to teach all the science. But, in any case, a special course would be necessary at an agricultural or other college.

The suggestion made some years ago by the Board of Education that teachers should take a third year's course at an Agricultural College would, he thought, never work out in practice. First, directly a man has got his training college certificate, he is anxious to earn his living, and after he has started earning his living, he is naturally disinclined to have another year's course of instruction at a college where, although his expenses will be paid, he will be earning nothing. Again, the Board of Education have a certain figure for the cost of a year's training, and as this figure is below the fee which is paid by Kent and Surrey students at Wye, this college (which is one of the Colleges recognised by the Board of Education for the purposes of this course) would thus be the loser on taking such teachers. He had suggested to the Board of Education that if a sufficient number of teachers came for the third year's course the expenses could possibly be reduced by putting them in a separate hostel and making special arrangements for them: but the Board said they wished them to be treated socially and educationally in exactly the same way as the other students of the College.

The suggestion has been made that the Training Colleges should have a rural science department, but it would be impossible to get would-be teachers to declare whether they were going in for country or town teaching, but he was strongly of opinion that if the science teaching of the Training College were properly organised, a

foundation which he laid on which the town teacher could build at the ordinary technical colleges, and this foundation would be equally useful for the rural teacher in taking courses at an Agricultural College.

He thought that local rural teachers could be helped by a visiting teacher who would call at each school about once a month and assist the teacher in demonstrating simple experiments to the children. The visiting master would not take the class, but the teacher could refer to him any difficulties encountered and the visiting master could probably suggest ideas. With this in view they had started at Wye an Association by correspondence of teachers who had attended the vacation course, and they sent out from the College suggestions for seasonal experiments. The College also gained by this arrangement, as the members of the Association acted in many cases as the "eyes and ears" of the College staff. Asked whether he suggested that a certificate should be awarded in connection with these vacation courses, Mr. Dunstan said that teachers were fond of receiving certificates, and he thought that care must be taken not to encourage them in the idea of collecting certificates. On the other hand, no objection could be taken to the giving of a certificate to the effect that the teacher had attended the course and had benefited by it. He would like to explain that as regards the courses held at Wye, 70 to 80 per cent. of the teachers attending them come to obtain useful information. There is great competition among teachers to attend, and it is sometimes regarded as a "cheap holiday," but it is not only the social side that attracts teachers. He thought that country-bred teachers were able to benefit by the course much more easily than town-bred teachers.

Asked why he had not mentioned "agriculture" as one of the subjects to be taught at these courses, Mr. Dunstan said that he was entirely opposed to the teaching of agriculture *quâ* agriculture in the elementary schools, and he thought that it would be a dangerous thing to let the teachers go away from the College thinking they were in any way agricultural experts. He recalled the failure connected with the teaching of "the Principles of Agriculture" some years ago. He agreed that there were many things which could be taught, such as pruning fruit trees or thatching and hedging, but not farming. The rudiments, not the principles, should be taught. In this connection he said that there was no difficulty in a teacher correlating the three R's with the teaching in rural subjects.

(i) Mr. Bickersteth.

Witness stated that the East Riding was an almost exclusively rural area. Considerable difficulty was experienced in getting really suitable teachers for the schools, and this difficulty was slightly more pronounced in the remote country schools. Witness said that he did not refer to teachers who had been in any special way trained for work in a rural area, but it amounted to this—that experience in the East Riding indicated that it was generally difficult to find good teachers. Probably, in view of the higher salaries and the greater care taken in selection, the appointments since 1902 might be said to be more satisfactory than some of those made in the previous years, but the Education Authority were not by means satisfied with the teachers they were able to get. The real reason for the shortage of suitable trained rural teachers was that good teachers, whether rural or not, were rare. He considered that the salaries paid to Elementary School teachers should be improved, and that the status of such teachers should be raised. A good teacher should be more highly valued by public opinion. He considered that the primary qualifications of such teachers were sobriety, cleanliness and tidiness, teaching ability and industry. He laid no stress on "special rural qualifications" and considered that character in a teacher was the main essential. A teacher should also have ability to teach, and Witness considered that the present opportunities for obtaining ability to teach were not insufficient, but were unsuitable in so far as the essential point, which is to impart teaching skill, was neglected.

Witness considered that the Local Education Authorities should provide reasonable facilities for training suitable teachers in special subjects, but only in subjects which the selected teacher was well fitted to handle. The East Riding Authority believed that specialised forms of instruction ought not to be allowed in every case, but only to such teachers who were likely to profit by it. What they least desired was an inefficient teacher laying stress on his "accomplishments," and not on his ordinary

sound daily work. Cookery and gardening were the two special subjects, which, in his opinion, might be taken up in a county like the East Riding, without injury to the real work of the Elementary School, but he would be sorry to see cookery and gardening made compulsory subjects in every rural Elementary School. Schools should be carefully selected for these subjects according to the personal qualifications of the teacher. So far as gardening was concerned, where they had a teacher who they thought would benefit by being sent to a special course, they sent him to holiday classes at Garforth. Such classes in two successive years would put such a man in a position to give lessons in Gardening. He thought that attendance at that course would be better than a third year at a Training College taken as a matter of course. He did not think, however, that three years at a Training College was too long to make a good teacher, and considered that a third year's course after the ordinary Examination had been passed was good for teachers. He considered that if rural subjects were to be introduced into it they should be taught in such a way as to benefit all classes of teachers whether town or country.

(j) Mr. Maudson Grant.

Witness had examined the appointment forms of 122 Head and Certificated Assistant Teachers appointed to rural schools in Lindsey during the last three years, and found that only 30 offered subjects having a special bearing on rural life. It could not, however, be inferred that the other 92 teachers were unsuitable for rural schools. Many readily adapted themselves to rural requirements and were eager to attend any special courses for preparation offered them. Witness referred to the experiment carried out in Lindsey by which handwork subjects only were taken on three afternoons a week in 25 Schools. The success of this experiment had been so great that it was being extended to another 25 Schools this year. There were 284 rural schools in Lindsey, and he considered that each of them should have at least one suitably trained teacher. He thought that there were three main reasons for a lack of teachers possessing rural qualifications:—

- (a) The majority of teachers hoped to be appointed to a town school because of the higher salaries offered, and their energies were devoted to preparing themselves for urban teaching;
- (b) College courses and Teachers' Training Regulations were prepared chiefly by townsmen, and, however sympathetic towards rural needs, they did not fully understand and appreciate those needs. As teachers were mainly looking towards the town, they did not agitate for courses suitable for rural work;
- (c) The Regulations of the Board of Education for the preliminary training of teachers resulted in a large preponderance of town children entering the profession; the schools to which Bursars and Pupil-Teachers went were in the towns.

Witness's idea was that the Local Education Authority should be allowed a free hand in drawing up a scheme for the preliminary training of teachers by which village schools should be grouped for teaching special subjects. In 1903 there were Pupil Teachers in a large number of village schools, and about one-third of the children being trained were country children. The village school boy did not, however, at present enter the teaching profession. The best teachers for rural schools were as a rule those who had been born and bred in the country and who had never really lost touch with it. Teachers should have as good a general education as could be provided for them, with Training College preparation, and should have opportunities of adding to all this by means of special training in such rural subjects as might particularly attract them. It had to be remembered that the children they taught were seldom more than 13 years of age, and that it was not so much a knowledge of advanced science that was required as a general broad education and a familiarity with country pursuits and character. To those qualifications should be added a good first-hand knowledge of such subjects as plant, animal and insect life, and they should be skilled in the use of their hands so as to be able to pick up such subjects as gardening, woodwork, &c. Women should, in the same way as men, be trained in the use of their hands. Witness had seen women teachers in Lindsey taking, quite efficiently, light

woodwork, and school gardening classes. The instruction for teachers was provided in Lindsey in—

- (a) theoretical and practical gardening ;
- (b) nature study and rural economy ; and
- (c) educational handwork.

For gardening there was a course divided into two portions, viz., a Winter course of 20 to 25 Saturday morning lectures, and the second portion, purely practical, carried on in a model school garden where actual garden work was done on Saturday throughout the Spring and Summer. Only one centre was taken each year and was attended by an average of 17 teachers, who received Railway fares, where necessary. nature study and rural economy courses were provided for by means of scholarships enabling teachers to attend a fortnight's Vacation Course at the Midland Agricultural College. Sixteen teachers from Lindsey attended this Course each year, and altogether 84 teachers had been through it. There were also nature study excursions on Saturday afternoons : six of these had been held with an average attendance of 40 teachers. It was proposed to hold a Vacation handwork course, lasting a fortnight, for 20 teachers, which would have a considerable rural bias.

Witness considered that instruction after teachers left College was the only practicable method. They would have their eyes open to what were the conditions under which they would teach and would know better at what to aim. If a substantial Treasury grant were given to Local Education Authorities, they would establish courses suitable to their districts.

The salaries in village schools should be brought up at least to the standard of those in the town, and, until this was done, rural education would never be thoroughly reformed.

(k) Mr. Elford.

Witness considered that it was difficult to find teachers capable and anxious to give rural teaching in Elementary Schools. In Oxfordshire, 214 out of 233 schools might be described as "rural," and there ought to be at least one specially qualified teacher at each School. In very small rural schools it was necessary to employ teachers who could not in all cases be expected to give agricultural or horticultural instruction. It was difficult to get men teachers to stay in small schools of only about 20 scholars.

He considered it of the utmost importance that teachers should be specially trained, but there was no Institution where certificated teachers could readily receive special scholars.

In Oxfordshire, the Horticultural Instructor had trained from 120 to 130 Head Teachers most admirably by holding Saturday classes at suitable centres, and as a result of this, there had been a large increase in the number of school gardens. The Local Education Authority would not, however, allow a school garden to be started unless they considered the teacher to be satisfactorily qualified.

The Local Education Authority's method of getting the teachers to provide the land while the Local Education Authority supplied seeds and manures and allowed the teacher to take the produce of the garden, resulted in a considerable keenness to set up school gardens.

For the last 15 years teachers had been trained in manual work in Oxfordshire, and such work was gradually being introduced into the Elementary Schools. Every Head Teacher ought to be able to teach gardening and manual work and in order to teach gardening properly, should have a considerable knowledge of the science underlying agriculture.

Witness considered that when students were at Training Colleges they would not readily appreciate facilities for learning rural subjects, and that it was much better that the opportunities for enabling them to obtain qualifications should be provided after the Training College course. Such opportunities were, however, at present quite insufficient.

In Oxfordshire there were Evening and Saturday classes for teachers for which all teachers were eligible, but those who were obviously unsuitable were eliminated. In addition, a certain number may be sent to Reading University College and other suitable centres for a Vacation course. The teachers are given every facility to attend such courses, but are required to pay something towards the cost. No certificates were granted and special qualifications brought with them no special remuneration.

He considered that courses provided by the Local Education Authority were better than courses in Training Colleges, but the latter might be more satisfactory if they were suitably organised. Witness was in favour of Local Education Authorities giving scholarships to teachers to go to Agricultural Colleges, but he thought that such scholarships should not cover all their expenses. The Local Education Authority should undertake to find teachers who had been to such courses suitable schools when they had completed them.

He was of opinion that after two or three years' service in an Elementary School, teachers could afford, and would be willing to pay, a contribution towards six months' instruction at an Agricultural College. Teachers should get rural training after they had had some experience of work of the schools, and not directly following their Training College course. If they went to a course at an Agricultural College, he thought the minimum should be six months, and the maximum twelve months.

With regard to training teachers for rural work by the Local Education Authority classes, Witness considered that Oxfordshire was in an exceptional position, as they had an Organising Horticultural Instructor, whose work had been of inestimable benefit to the county.

Witness considered it essential that for the training of teachers local rates should not be used, as, however much ratepayers approved of the training of teachers in rural subjects, they did not wish this work, which they considered a national one, to come out of their pockets. If the Board of Education paid grants equivalent to those for a third year's instruction at a Training College, it would enable Authorities to train the teachers on the lines desired.

Witness stated that he preferred country-bred teachers, as a rule, for rural schools, and on making inquiry found that 56 per cent. of the teachers in Oxfordshire were born and bred in the country, and 44 per cent. born and bred in the towns.

(1) Mr. Willink.

Witness stated that one reason why it was difficult to find suitable teachers for rural Elementary Schools was that many of the best teachers were apt to go to the towns, or at any rate not to apply for small school headships. Moreover, the appointment of teachers in voluntary schools lay with the managers, not with the Local Education Authority. He laid stress on the importance of general ability, and thought that teachers who possessed real capacity to control, organise, and teach were readily able to adapt themselves to the needs of children in country schools. He did not attach so much importance to definite training in rural subjects as to a broad general education in which such training should take its proper place. It was, of course, important that children in rural districts should be taught by means of school gardens, and in recent years some progress had been made in Berkshire towards the establishment of school gardens in connection with Elementary Schools. They had at the present time about 30 school gardens. Many of the teachers were themselves interested in gardening or had qualified themselves to give such teaching by attending evening or Saturday classes. No systematic attempt, however, had been made to secure that all the teachers in rural schools should be sufficiently trained in rural subjects. In Berks, a county of small schools, there are 126 Headmistresses to 121 Headmasters. It was not possible for Local Education Authorities to undertake to train their teachers in this direction without largely increased grants from the Board of Education. If classes were set up in connection with Agricultural Colleges to which teachers might go for two or three months it would not be difficult to supply their places in the schools in their absence. Part of the instruction might be given during the Summer holidays; and in two or three short courses of two or three months, rather than in single courses of longer duration.

Teachers were more likely to benefit from special training in rural subjects if such training was given after they had had some experience of teaching in Elementary Schools.

It was just as important to give girls domestic training which really is "rural," if properly taught, as to teach boys special rural subjects.

(m) Mr. Cranage.

Witness stated that the main work with which he was concerned was to arrange Local Extension Lectures. The Cambridge Syndicate had for many years arranged for lectures to teachers in rural subjects (a) in Training Colleges, and (b) in counties.

With regard to (a), lectures had been held in the Training Colleges at Bishop's Stortford and Chichester. The most extensive system of lectures in the counties had taken place in Norfolk. For 20 years courses had been held in Norfolk at various centres. The County Council paid the lecture expenses and the teachers' railway fares. Witness had been told by the Secretary to the Norfolk Education Committee that the lectures had made a great deal of difference to the teaching in rural schools, and Mr. Austin Keen, Secretary of the Cambridgeshire Education Committee, had spoken very warmly of the courses.

By this time most of the Head Teachers in Norfolk schools had been through rural schools. Witness was surprised that other counties did not take up similar lectures, and thus equip their teachers to give suitable rural instruction. He considered that Local Education Authorities would be greatly stimulated if the Board of Education gave larger grants for attendance at such courses of lectures. There were also some Vacation courses held at Cambridge every year which were arranged by the Syndicate for lectures, and witness considered that the ideal system of training teachers in rural subjects was that they should attend Saturday classes in the winter, and that suitably selected teachers who had attended these classes should be given scholarships for a three weeks' Vacation course in the summer at the Agricultural Department of the University.

Witness handed in papers giving particulars of the Lecture courses for teachers and long Vacation courses for teachers.

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

R E P O R T

OF THE

RURAL EDUCATION CONFERENCE

ON

A SUGGESTED TYPE OF
AGRICULTURAL SCHOOL.

Presented to Parliament by Command of His Majesty.



L O N D O N :

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1911.

[Cd. 5774.]

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This Report was prepared by the Rural Education Conference, which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June, 1910.

RURAL EDUCATION CONFERENCE.

Report on a suggested type of Agricultural School.

1. The second reference to the Rural Education Conference contained in Sir Robert Morant's letter of July 29, 1910, is as follows:—

“As to whether there is any place in the system of Rural Education either generally or in particular counties, in view of special local conditions for schools giving to boys leaving Elementary Schools a three-years' Course from the age of 12 or 13 in the Theory and Practice of Agriculture, together with continued general education.”

2. The Committee to which the detailed consideration of this question was referred held eight Meetings. They have endeavoured to ascertain if any schools of the type indicated in the reference at present exist in England and Wales, Scotland, Ireland, France, and Canada. They interviewed the witnesses and received notes from the persons whose names are set out in Appendix I. They were also furnished with memoranda by three of their members—Mr. Graham Balfour, Mr. Grant, and Mr. Verney.

3. We have had first to consider for what class of boys the type of school indicated is required. The reference appears to cover all boys leaving Elementary Schools, whether these boys (i) intend to get their living, at all events at the outset, as agricultural labourers, or (ii) intend to become farmers or small occupiers. We think that the circumstances of these two classes are sufficiently distinct to be considered separately.

4. As regards the first class, *i.e.*, the boys who will become agricultural labourers, we understand that the type of school intended is one where these boys will be given a suitable general education in which the manual side will be fully developed, and theoretical and practical instruction in agriculture and its processes in order to make them more efficient labourers. We have come to the conclusion that there is at present no general demand for such schools and that there is no place in the system of rural education for schools of this exact type being carried on continuously throughout the week.

Part time day continuation schools for this class of boy are considered in paragraph 16.

5. Two main considerations influenced us in coming to this conclusion. In the first place there appears to be a consensus of opinion among practical agriculturists that boys of this class who intend to live upon the land should get on to the land and into practical work on the land as soon as possible after leaving an Elementary School. In this view we were strengthened by the attention called in the Report of Lord Reay's Committee to the great advantage which the agriculturist derives from beginning to learn his business at an early age.

6. On the other hand, we have had some evidence to show that the boys who go into employment on the land are not properly taught, nor is their interest aroused in the processes of the farm, and it was suggested that with a view of training expert labourers it would be a useful experiment to establish for specially-selected lads a school or schools with a farm attached, to give instruction in the theory and practice of agriculture.* It was also stated to us that there are at present no schools to which town boys may be sent who wish to learn agriculture with a view to employment on the land,† and that such schools would be attractive to townsmen throughout the country.‡ It was urged that the results of some of the Reformatories and Industrial Schools, and the subsequent records of the boys placed by those schools, show that expert workmen could be turned out direct from school when the course is continued up to the age of 16. These arguments, with which we have dealt in subsequent paragraphs, do not seem to us sufficient to outweigh the prime importance of putting boys to work on a farm at an earlier age than 15 or 16.

7. The second consideration which weighed with us was that of expense. Schools of this type would usually have to be boarding schools, to which the parents of boys of the labouring classes could only afford to contribute very low, if any, fees. Moreover, parents would have to forego the wages which their sons might otherwise earn.

* See Appendix IV. (f).

† See Appendix IV. (d).

‡ See Appendix III. (c).

8. While we are unable to recommend any new type of school being established for the future agricultural labourer, we consider it essential to extend and develop the manual instruction and nature study teaching given in the upper classes of rural Elementary Schools. It is unnecessary for us to describe the kind of instruction required, as it has been fully dealt with in Chapter 2 of the Board of Education's recent Memorandum on the Principles and Methods of Rural Education. We wish, however, to point out that the proposals for raising the Elementary School age, if carried into law, will necessitate, in our opinion, the giving of a greater proportion of practical instruction to children who are kept in the schools above the age of 12. We also desire to record our opinion that there will be no general development of such instruction unless more liberal grants are made by the Board for the teaching of "special subjects," and more encouragement is given, both by the Board and by local authorities, to country teachers to qualify for giving such instruction. We would also further suggest that in some cases it might be possible to utilise Elementary School endowments for the provision of such practical instruction, and in this connection we desire to refer to paragraph 65 of the report of the Departmental Committee on Educational Endowments (Cd. 5662).

9. As regards the second class of boys mentioned above, *i.e.*, those who intend to become farmers or small occupiers, we think that very different considerations attach. While it is extremely important that these boys should, from an early age, become familiar with the practical work of the farm, it is also in our opinion essential that they should not leave school without acquiring a good knowledge of the theory and practice of agriculture (so far as it can be taught in school) together with good general instruction, both literary and scientific, to make them more intelligent and receptive members of the farming community than in the past. We think, therefore, that this class of boys requires something beyond the ordinary Elementary School, and we have considered carefully the different types of schools existing in England and (so far as we could obtain information) in other countries, which are in any way akin to the type mentioned in our reference. A short description of these schools will be found in Appendix II. and in Appendix IV. (*h*).

10. The schools at present in existence in England which approximate most closely to the type suggested by the reference appear to be those Industrial and Reformatory Schools in which agricultural instruction is well developed,* and the evidence shows that farmers are very ready to employ boys who have been trained in this way.† Though the division of the curriculum between general and vocational instruction suggests the type indicated in the reference, the course of instruction in these schools lasts as a rule considerably longer than three years and is continuous throughout the year. This consideration and the disciplinary conditions under which the boys attend them, prevent our recommending these schools as exact models for the agricultural boy who has attended the ordinary Elementary School.

11. It will be seen from Appendix II. (4) and from Chapter 3 of the Board of Education's recent Memorandum, that there are already a small number of Secondary Schools giving specialised rural instruction. In districts where these schools exist and the fees and boarding charges are low enough to admit of the attendance of the sons of small farmers, we consider that no further facilities for rural education for that class of boy up to the age of 16 can reasonably be required. But it must be remembered that, even allowing for the number of free places and scholarships now given in these schools, the boarding charges are often prohibitive for boys of the poorer classes, and that, consequently, each of these schools can, for such classes, only serve as a day school. Moreover, where such schools do not at present exist and there are no endowments available for bringing them into existence, it will be hopeless to expect the local authorities to establish many new schools of this special type without further aid by way of building grants (including grants for the necessary land), or otherwise, from the Central Authority. And if these schools are to continue to give the specialised form of instruction, the requirements of the Board as regards the higher class of scientific and literary teaching will have to be somewhat relaxed to allow time and opportunity for the agricultural work.

12. However much encouragement is given to the development of rural Secondary Schools, and to the improvement of rural instruction in the ordinary rural Elementary Schools, we think that there is still room in certain districts for the trial by way of experiment of one or other of two new types of school.

* See Appendices II. (5) and IV. (e).

† See Appendix IV. (a) and (e).

13. One of these types, adapted to the instruction of future farmers, would be akin to the present "Higher Elementary School" specialised in an agricultural direction and not altogether unlike the agricultural section of the French Ecole Primaire Supérieure described in Appendix II. (12). This type of School, which has not hitherto been tried in England, appears to us to give much more promise of success than schools professedly giving a large amount of instruction in practical agriculture, such as "fermes Ecoles" which have proved unsuccessful in France. We do not, however, think that the schools we recommend would be largely established unless they were aided by more liberal grants than those at present made to Higher Elementary Schools in England. It will be seen from Appendix II. (9.) that even the larger grants offered in Scotland have hitherto been insufficient to induce local authorities to set up this type of school.

14. The curriculum of these Schools which might be termed "Higher Grade Rural Schools" should include practical gardening and other manual instruction, as well as nature study, elementary science, mensuration and surveying, and rural economy. Occasional visits to farms, if possible under the guidance of an intelligent farmer, should be encouraged and some teaching of manual work incidental to farming operations might be given by practical instructors, but with these exceptions "the practice of agriculture" in the strict sense of the term would not be taught in the school hours.* The great majority of the boys would, it is presumed, be engaged in farm work during their holidays, which should be sufficiently extensive for the practical application of their school instruction. The general curriculum would not include so much literature and languages or higher mathematics as that of a Secondary School; neither would the buildings be so costly to provide and equip, or the staffing be so strong as is now required by the Board's Secondary School Regulations. It would also not be necessary to retain the pupils for so long a period as at a Secondary School. Leaving school at 15, or at most 16, they would then pursue ordinary farm work, though in many cases they might, after an interval of practical training, attend courses at a farm institute or agricultural college.

15. As regards the school fees, it might be left to the local authority to determine whether the instruction should be given free, or whether a moderate charge should be made to the ordinary pupil, with a fair provision of free scholarships. If these schools are to serve a large district there will have to be provision made out of public funds for boarding allowances and travelling expenses.

16. Another type of school which we consider worth trying as an experiment is what may be described as a Centralised Rural Continuation Day School where boys actually engaged in work on the land between the ages of 12 and 16, or even 18, might be brought in several sets for one or two days a week. Such schools would serve areas (not exceeding a radius of 8 to 10 miles) which would vary in size according to the local conditions. They would usually consist of one or more rooms, well equipped for manual work, large enough to accommodate a class of not more than 20 boys under the charge of one specially trained master. While their general education would be continued, they would also receive instruction in elementary science and rural economy with direct bearing on their actual employment. The masterships of these schools should act as prizes to capable and specially qualified rural teachers, and by this means teachers might be induced to take up work in rural schools more readily and prepare themselves specially with a view to such teaching. No doubt considerable difficulties would arise, in the case of agricultural labourers, in arranging with the employers to spare the boys, and with the parents to forego their wages for a portion of the week; but we think the advantages of such schools, if suitable teachers were forthcoming, would be appreciated in certain districts. They would at any rate not be hampered by some of the difficulties and objections which have been found to arise in the working of the "Robson Clause" and other half-time systems. The instruction at these schools would have to be free, and probably some small scholarships would have to be given by the local authorities, at any rate in the first instance, and local endowments might often be utilised for this purpose.

17. In recommending the trial of such a Continuation Day School as is described in the previous paragraph, we have not overlooked the excellent work now being done in so many counties by the Evening Continuation Schools. These schools, which we consider deserving of all encouragement, especially when the instruction is given a

* See Appendices III. (e) and (f) and IV. (b).

“rural bias” and school gardens are provided, do not appear to us ever likely to meet universally the demand for continued education for the agricultural classes. The pupils cannot, as a rule, be expected to come long distances or give intense application to their studies after a hard day’s work, nor are the teachers available in many villages qualified to give suitable instruction to lads of 14 or 15. They are often women on whom teaching in the evening as well as in the day-time imposes too much physical strain. There is often also a difficulty in finding a building equipped for the manual work which is essential in Rural Continuation Schools. The establishment in certain centres of such a type of Continuation Day School as we recommend would remove many of these difficulties, and would facilitate the introduction of such a system of continued education as has often been recommended as a substitute for prolonged detention at the Elementary Day School.

18. We have referred above to the demand made in some quarters for schools of agriculture or farm schools for the training of town boys, often with a view to emigration to the Colonies. While we think that such schools if established by private effort might well be assisted by Government grants under the Board of Education’s Regulations for Technical Schools, we are not disposed to recommend the recognition of such schools as a normal type of Day Continuation School. The conjunction of a farm with a school for boys raises many difficulties, both from an educational and financial point of view, and we think, as we have said before, that the work of practical agriculture can be best learnt (at any rate at the outset) on an ordinary, well-managed farm under the eye of an intelligent employer.

19. We have not thought that the education of girls in rural districts came within the scope of our reference.

20. Attached to this Report are appendices, with notes of the various types of school which we have considered, and summaries of the evidence, which we have received.

26th May 1911.

HENRY HOBHOUSE,
Chairman.

APPENDIX I.

LIST OF WITNESSES, &c.

1. The following witnesses were interviewed by the Committee:—

Mr. T. S. Dymond, one of H.M. Inspectors in the Technological Branch of the Board of Education ;
 Mr. Austin Keen, Secretary of the Cambridgeshire Education Committee ;
 Mr. J. H. Nicholas, Secretary of the Essex Education Committee ;
 Mr. J. S. Ballin, Chairman of a Committee formed to promote the establishment of a National School of Agriculture ;
 Mr. T. D. Robertson, H.M. Chief Inspector of Industrial and Reformatory Schools ;
 Mr. H. N. Lewis, Head Master of Boulter's School, Langworth, Lincolnshire ;
 Mr. A. H. Matthews, Secretary of the Central Chamber of Agriculture.
 Dr. J. W. Robertson, C.M.G., formerly Commissioner of Agriculture for Canada.

2. Written communications were also received from —

Mr. G. A. Bellwood, who represents the National Farmers' Union on the Rural Education Conference ;
 Mr. D. T. Cowan, Secretary of the Hampshire Education Committee ;
 Mr. F. L. Green, Secretary of the Rural League ;
 Mr. H. W. Household, Secretary of the Gloucestershire Education Committee ;
 Mr. A. Keen, Secretary of the Cambridgeshire Education Committee ; and
 Professor M. E. Sadler.

APPENDIX II.

NOTE ON SCHOOLS IN WHICH THE INSTRUCTION HAS A DIRECT OR INDIRECT BEARING UPON RURAL PURSUITS.

ELEMENTARY SCHOOLS.

1. In some of the Public Elementary Schools in rural districts a special attempt has been made to base the teaching given in school on the conditions of the school surroundings. By this means a considerable amount of rural knowledge is acquired without the inclusion of agriculture in the curriculum. The arithmetic lessons are based on field measurements and the like ; the observation lessons are concerned with seed testing, insect life, plant growth, the practical application of which may be carried out by the children in the school garden or, if the interest is sufficiently aroused, in the gardens of their own homes. In this way the general education is brought into connection with and made more living by its contact with the actual conditions and operations to which the children are accustomed in their ordinary life.

2. There are scattered up and down the country a number of rural Elementary Schools which have endowments. In the schemes of some of these schools clauses have been inserted which provide that money may be spent for the instruction of children or young persons who are or have been in attendance at a Public Elementary School in subjects of practical or technical instruction such as handicraft, gardening, agriculture, dairywork, cookery, laundry-work, and household management.

There does not, however, appear to be any complete information to show the extent to which use has been made of the power by Trustees of such Endowments, but from such inquiries as we have made it appears that the use made of such clauses, so far as agriculture is concerned, is confined for the most part to the provision of scholarships.

HIGHER ELEMENTARY SCHOOLS.

3. There is apparently no school of the type suggested by the reference recognised as a Higher Elementary School, although such a school with a three years' course appears to be possible under Articles 37 to 42 of the Code. In Article 38 (*d*) it is stated that the curriculum must have for its objects the development of the education given in the ordinary Public Elementary School and the provision of special instruction bearing on the future occupations of the scholars, whether boys or girls. It is doubtful how far the terms of this Article would cover the teaching of practical agriculture.

Little encouragement was given in the report of the Consultative Committee on Higher Elementary Schools, 1906, to specialisation in the direction of agriculture in these schools.

They say that "in the rural districts where agriculture and the occupations connected with it are the prevailing industry the evidence goes to show that very little specialisation is possible. You cannot do much with regard to agricultural education even in these schools. You cannot teach the actual manual portions of farm work in school; it must be done on a farm. On the other hand, it is not only possible but very desirable . . . to give the instruction with an agricultural tone, to encourage nature study and to illustrate the teaching generally from examples familiar to country children, to illustrate the principles of elementary science, for example, from botany, and to familiarise the children with the conditions of country life as something intelligible and interesting. . . . The children are so mixed that you want to teach something useful to them all, and such subjects will be useful to all, fitting them for a country life in any capacity."

SECONDARY SCHOOLS.

4. There seem to be very few public Secondary Schools equipped with what may be called an agricultural side. Some such schools were prescribed by certain schemes of the Charity Commissioners, but it is believed that most of these schemes have been modified. An example of such modification is to be found in the Dauntsey School, at West Lavington, in Wiltshire, which is an Educational Foundation (in which is included the Dauntsey Agricultural School) governed under a scheme. The school was founded with the definite object of making special provision for the needs of boys destined for agricultural pursuits, but the scope of the school was materially altered by the Scheme of 1909, when the admission age was formally reduced from 14 to 11, and a Secondary School curriculum, with definite agricultural teaching in the upper forms, provided. A considerable number of boys, however, still enter from private or other Secondary Schools at the age of 14 or 15 in order to obtain the benefit of the special agricultural instruction which is given in the upper forms.

In certain Secondary Schools where no practical agriculture is actually taught, an attempt has been made to give a "bias" towards this subject throughout the curriculum.

The chief difference between these and the ordinary Secondary Schools is in the handling of the subjects. Without in any way detracting from their educational value the usual subjects are treated so as to interest the pupil in country life. In mathematics, mensuration secures special attention, and drawing is correlated with nature study, science, and manual instruction. In science the scheme is more developed. Simple nature study leads up to chemistry, physics, and botany, which are treated from an agricultural standpoint, and are co-ordinated by means of lessons in rural economy and agricultural science. The pupils get the fundamental knowledge underlying the processes of the garden, farm, and dairy, and these are illustrated by experiments in the field and garden.

Examples of schools of this type are North Eastern County School, Barnard Castle; Beaminster; Sexey's School, Blackford; Brewood; Hanley Castle; Knaresborough; and Shepton Mallet.

A typical syllabus of a science course for rural schools, which is taken from the Board of Education's recent Memorandum on the principles and methods of Rural Education, is as follows:—

PREPARATORY.

Nature Study.—Collection of wild plants obtained during nature-study rambles, pressing and mounting them, and drawing them from nature. Keeping aquaria. Growing flowering plants in the garden.

Measurement.—Elementary work in measuring and weighing, with scale-drawing, and practical cardboard work or light woodwork in the construction of articles and models.

FIRST PERIOD OF THREE OR FOUR TERMS.

Chemistry and Physics.—Practical study of air and water, of mineral substances, and of the products of animal and vegetable life, those substances and reactions being studied, a knowledge of which is necessary for the student of rural or domestic economy.

Biology.—Examination and description of familiar wild and cultivated plants, leading to the grouping of important families. Practical study of the life history of a few insects common in the locality and having economic importance (useful or injurious).

Outdoor Work.—Practical cultivation of common vegetables on the pupils' own plots.

SECOND PERIOD OF THREE OR FOUR TERMS.

Biology.—Practical study of plant life in relation to the soil.

Outdoor Work.—Experimental cultural work on the germination of seeds (sown at different depths, at different periods, in different quantity, &c.) ; on the influence of deeper cultivation and of hoeing, rolling and other processes ; on the temperature and water-content of the soil and on plant growth ; on the supply of plant food, &c.

Chemistry and Physics.—Revision in connection with the foregoing work of the chemistry and physics already done, especially the subjects of solution, density, capillarity, specific heat, latent heat, radiation of heat, and absorption of heat.

THIRD PERIOD OF THREE OR FOUR TERMS.

Chemistry.—Further practical work in the chemistry of the acids, bases, and salts commonly met with, leading up to a knowledge of the principles of the science.

Biology.—Study of the structure of plants.

Outdoor Work.—Planting and propagating fruit trees. Cultivation in botanical plots of grasses, clovers, cereals, crucifers, &c.

REFORMATORY AND INDUSTRIAL SCHOOLS.

5. Another type of school similar to that contemplated by the reference appears to be the Industrial School and Reformatory. Most of the schools which are classified as "Farm and Country" in the annual Home Office Report provide training in the manual processes of agriculture (and other industries) while continuing general education. In some of these schools a thoroughly practical farm training is given, a large proportion of the lads become farm labourers and the farmers seem to be glad to get them.

It appears from the report of the Chief Inspector on Reformatory and Industrial Schools, 1909 (Cd. 5203), that at most of the schools various industries are taught, but in the majority agriculture and horticulture are prominent forms of industrial training.

The following syllabus is typical for schools in which agricultural teaching is well developed.

AGRICULTURE.

(a) *Theory*.

1. Soils. 2. Manures. 3. Seeds and their requirements. 4. The Plant.
5. The Crop. 6. Farm Crops. 7. Garden pests and friends.

(b) *Notebooks*.

Which contain :—1. Remarks on each crop. 2. Causes of failure or abundance.
3. Which crop paid best for growing. 4. Plan of ground when fully cropped and when left in October. 5. Receipts and expenses.

(c) *Practice*.

1. Cultivation. 2. Vegetable culture. 3. Fruit culture. 4. Flower culture.

POOR LAW SCHOOLS.

6. There are also 80 Poor Law Schools certified under the Poor Law (Certified Schools) Act, 1862, which are inspected by the Board of Education, but only a small number provide facilities for agricultural and horticultural work.

Indeed, so far as the reports on such schools show, little is being done to train boys in farm or garden work (*see* Board of Education Report on Poor Law Schools, 1908).

SCOTLAND.

7. There seem to be two types of schools contemplated by the Scotch Code somewhat akin to that suggested by the reference.

(a) Supplementary Courses.

(b) Higher Grade Departments.

Under Article 29 (1) of the Code a scholar who has been placed in the highest class of the School and has been in regular attendance at that class for not less than six months, upon being certified by the teacher of the class and the Head Master to be of good proficiency, may be presented to the Inspector for approval of his enrolment in a Supplementary Course or a Higher Grade Department.

A Supplementary Course, which is intended for pupils in Primary Schools who complete the purely elementary part of the school curriculum before the time for leaving school, follows a curriculum divided into two parts. The first part consists of (a) the study of English and (b) certain studies bearing upon matters which it is of concern that all the pupils should know whatever their occupations in after life are to be. Details of these subjects are set out in the Fifth Schedule of the Code.

The second part may be one of four special courses of which one is specially designed for rural schools.

This course, which is given in the Sixth Schedule of the Code, consists of—

(1) *Nature Study*.—Continued so as to secure on the part of the pupils familiarity with—

(a) Rocks, soils, and plants, (b) weed and insect pests with remedies, (c) pollination of plants, (d) relation of air, water, and soil to vegetable life.

(2) Geometry in its application to land measuring and surveying :

(3) Study of newspaper market reports with exercises and calculations :

(4) Keeping of accounts :

(5) Woodwork or ironwork (optional).

The instruction in these subjects is to be practical, and special grants are offered where the instruction is of a sufficiently practical character given through the medium of a school garden. It is suggested too that use should be made of any agricultural experiment stations in the neighbourhood.

At the rural school in the village of Ednam, Roxburghshire, according to an account written in 1909 by Mr. J. C. Medd, all the pupils over 12 years of age receive two hours' instruction daily, viz., Monday, dairying (boys and girls); Tuesday, cookery (boys and girls); Wednesday, gardening (boys), dressmaking (girls); Thursday, dairying (boys and girls); Friday, woodwork (boys), gardening (girls). During the winter months, when dairying is discontinued, boys have simple experimental science and girls laundrywork. All the instruction is given by the ordinary staff but its success seems to be largely due to the special qualifications possessed by the Head Master and his wife. The school earns grants as a Continuation class.

8. In Higher Grade Departments the curriculum must extend over three years. It embraces English (including history and geography), mathematics, drawing, experimental science and modern languages in accordance with the memorandum which forms Appendix IV. of the Scotch Code. In rural schools the instruction is to be based largely on the school surroundings and as much practical work as possible is to be undertaken. In that memorandum, however, little mention is made of rural subjects beyond the investigation of plant life and the elements of botany.

Though the Scotch Code offers the opportunity for rural education of these types, very little advantage appears to have been taken of it up to the present time.

9. It may be of use to compare the position as to grants for Higher Elementary Schools in England with that of grants for (a) Supplementary Courses, and (b) Higher Grade Departments in Scotland. In England the grants are, for the first year, 30s. per unit in average attendance; for the second year, 45s.; and for the third and fourth years, 60s. In addition to these there is a fee grant of 10s. for scholars under 15, and aid grant of 4s.

In Scotland the normal grant in Supplementary Courses is 50s. for each unit in average attendance over 12 years of age. This may, however, be supplemented by extra grants for attendance at courses in experimental science at the rate of 12s. 6d. per 100 hours, and in manual instruction, cookery, laundry-work, agriculture, horticulture, dairying, &c., at the rate of 8s. 4d. per 100 hours.

In the case of Higher Grade Departments, the grants are for the first year 50s. for each unit in average attendance, for the second year 70s., for the third year 90s. To this an extra grant of 10s. may be added for schools in the Highlands.

It will be seen that while a child in England in the first year at a Higher Elementary School could only earn 44s., a child of the same age in a Supplementary Course in Scotland could earn 70s. 10d., and in a Higher Grade Department 50s., or, in the Highlands, 60s.

IRELAND.

10. In Ireland, as far as we have been able to ascertain, there appears at present to be no provision for schools of the type indicated in the reference.

We have received from the Board of National Education, Ireland, the following memorandum on School Farms:—

“The policy of making grants for agricultural instruction in connection with the Irish National system was one that was taken up by the Commissioners almost from the very commencement in 1837. The classes of institutions aided by the Board were roughly of two kinds: the first were agricultural schools which were rented and maintained by the Commissioners, and in which the farm buildings and offices were erected out of public funds. The other class consisted of ordinary national schools to which farms were attached, but in which the land was not held by the Commissioners, and to which the only grants payable were assessed on the proficiency of the pupils and on the instruction given in the farms.

“The first class of agricultural instruction was costly and was continually the subject of attack. In 1870 the Powis Commission recommended that the model farms (as they were called when under the exclusive management of the Board) should not be retained (except such as were self-supporting), and this condemnation was followed up in 1874 by the recommendation of a Treasury Departmental Commission which examined into the affairs of the Irish Education Department in that year. Pursuant to these recommendations the Commissioners took steps to reduce the number of the model farms, and after 1880 they had only two of these institutions on their books, namely, the Glasnevin model farm and the Munster farm at Cork. In 1900, on the extinction of the ‘results system,’ these two institutions were transferred to the Department of Agriculture and Technical Instruction by which they are still carried on with (it is believed) very satisfactory results.

“The Powis Commission of 1870 was not ill-disposed towards the second class of agricultural institutions mentioned above, which were known as ordinary agricultural schools, and the policy of the Board was to extend this system of instruction as far as possible. In 1870 there were 100 of these institutions in connection with national schools. This number rose to 175 in the year 1875, but subsequent to that year there was a diminution, and in 1900 there were only about 40 of these school farms aided by the Board. The decline in these schools was not altogether the result of the report of the Treasury Departmental Commission of 1874, although it would appear that this Commission looked unfavourably on all the Board’s schemes of agricultural instruction, and indirectly made the atmosphere unfavourable to their growth. The true cause of the decline must be looked for elsewhere.

“The conditions under which these school farms were worked do not seem to have been productive of efficiency. The teachers were not selected on account of any particular skill or aptitude for farming. What happened as a rule was that if the teacher of an ordinary rural school was able to rent a farm of a few acres in the neighbourhood, an application would be made to the National Board for grants, and if the conditions did not seem unsuitable the school was taken on and aided as a ‘school farm.’ Results fees were paid to the teacher for instructing the older pupils of both sexes in the practical work of the farm, and a small grant amounting to 5*l.* (which might be reduced at discretion) was made on the Inspector’s report on the general state of the tillage and farm buildings. The average amount earned by the school was something about 10*l.* per annum. About the year 1881 the 5*l.* grant was increased to 10*l.*, on the recommendation of the Agricultural Inspector, who reported that the farms were worked at a loss to the teacher.

“In a great many cases the reports on these school farms were unsatisfactory, and the Board decided to withdraw their grants from them. In this way the number of school farms was reduced from 175 to 40 or so. It very rarely happened that the school farm was given up at the wish of the teacher or manager. In the great majority of cases the suspension of grants was due to the unfavourable reports. The

Inspector found in numerous instances that the teacher was unable to discharge the duties of practical instruction in farming with any approach to efficiency. It would appear that the work of discharging two duties—that of school keeper and of farmer—was beyond the ability and resources of many of the rural teachers. On the other hand, there was a substantial number of cases where the work done in these school farms was of a highly satisfactory character, but it may be said that this on the whole was rather an exception.

“The Viceregal Commission on Manual and Practical Instruction which sat in 1897 to 1899 reported unfavourably on the teaching of agriculture as a subject for National Schools, and in view of the fact that at about the same period the Government instituted the new Department of Agriculture under Sir Horace Plunkett, the Commissioners resolved to suspend the teaching of this subject in their Schools, and to hand over the making of provision for agricultural instruction to the new Department. Since 1900, the Commissioners have had nothing more to do with the school farms. It is understood that the Department of Agriculture was disposed to make use of them under their system, but they eventually decided not to do so, presumably because their efforts in agricultural training were addressed to adults, and in any case they have no statutory powers to expend their grants on the instruction of children attending Elementary Schools. They do not make use of the farms in connection with the teaching of agriculture to persons above the Elementary School age, and it is believed that the farms reverted to private use and ownership.

“It does not appear that opposition on the part of the parents had anything to do with the failure of the school farms. Small payments were made to the pupils amounting from 2*d.* to 4*d.* per hour for actual work done in connection with the farms. On the other hand, the model farms, which were under the exclusive management of the Commissioners, were in some cases unpopular. Some of them had been originally instituted at the desire of large land-holders, and during the land agitation in the period from 1879 onwards were looked upon with suspicion, but this feeling does not seem to have extended to the ordinary school farms.”

FRANCE.

11. Schools similar, at first sight, to those contemplated by the reference are the French *Écoles Pratiques d'Agriculture*. These schools were described by M. Grosjean, Inspector of General Agriculture in France, in a paper read at the Gloucester Conference on Agricultural Education, in 1904. They are intended for boys who have had a good primary education, and who wish to obtain a thorough agricultural training, theoretical as well as practical. The instruction necessarily varies according to the special requirements of different districts. There are schools specially directed, according to circumstances, towards viticulture, horticulture, dairying, irrigation, and so on. The great majority of the pupils come from families connected with the land. Before admission they are examined in French, arithmetic, history, and geography. The course of instruction is for two or three years, but there are more schools with a two years' than a three years' course, because the parents dislike the idea of losing their sons for three years. Pupils enter the schools at from 13 to 16 years of age; on the average they are in their 15th year. The division of time equally between theoretical lessons and practical work is the essential feature of the school. M. Grosjean states that the results of the school have justified the anticipations of their founders and supply a distinct want.

12. Another type of school, which is clearly differentiated from the *Écoles Pratiques* by there being in it no actual work on a farm, is the *Ecole Primaire Supérieure*. These schools were described by M. Le Blanc, Inspector of Public Instruction in France, in a paper read at the Gloucester Conference. They are usually held in buildings distinct from those of the Elementary School, and are, except in special cases, under different management. The minimum course of instruction is two years; if the course is for three or more years it is termed a “complete course.” Pupils cannot be admitted to a Higher Primary School unless they hold the Certificate of Elementary Education, and can show, by a Certificate signed by the Inspector, that they have been for at least a year in the highest class of an Elementary School. They may, but do not necessarily, enter the schools direct from the Elementary Schools. No fees are charged for instruction, and national bursaries are provided to meet boarding expenses or maintenance where students live at home or with neighbouring families. Bursaries are awarded after examination, but the general qualifications of each candidate are also taken into consideration. In schools with the complete course, the formation of one or more special sections—agricultural, industrial, or commercial—

may be authorised from the commencement of the second or third year. Manual instruction, agriculture, and horticulture together do not, however, occupy in the third year more than nine out of a total of thirty hours a week. An attempt is made to establish complete correlation between the agricultural teaching and physical and natural sciences. The instruction in the third year includes model instruction, civic instruction, French history, geography, modern languages, mathematics, physics and chemistry, natural history and hygiene, agriculture and horticulture, common law, political and industrial economy, drawing, modelling, manual instruction and agriculture, gymnastics, singing, and miscellaneous work.

13. The Fermes Écoles, which have been largely superseded by the Écoles Pratiques d'Agriculture, prepare mainly for the lower grades of agricultural labour, and very few of the pupils from them go on to schools of a higher type. Boys are admitted at the age of 14-16 for a two or three years' course, during which they live at the farm, receiving, as well as free instruction and boarding, a prize at the end of their training, amounting to a maximum of 12*l*. The work is almost entirely manual, the boys doing all the farm and house work, but three or four hours a day are devoted to theoretical instruction. The farm is worked on ordinary commercial lines, and the head of it is paid partly by the profit which he makes out of it.

APPENDIX III.

NOTES SUBMITTED TO THE COMMITTEE.

(a) NOTE BY MR. G. A. BELLWOOD ON RURAL ELEMENTARY EDUCATION.

The statements in this paper are based on the experience of a life spent in a district that is completely excluded from town influence, the centre being ten miles from the nearest town, and seven miles from the nearest railway station. The suggestions arise from observation, and occurrences in this district, and have the approval of the Executive Committee of the National Farmers' Union.

The Present System.—The parents of the children attending the schools are farm labourers, small tradesmen, small farmers, and large farmers. The whole of these are concerned in their children obtaining first, a good grounding in the three Rs.; second, as much general information as possible; third, to have their education finished as soon as possible. The labourers, small tradesmen, and small farmers desire to get their children free from attendance at school as early as possible to secure their earnings, or their assistance in the work of the business, or the farm. The larger farmer sends his children about the age of 12 away to private or higher schools for two or three years, in order to obtain a better education and training than the village school affords. In scattered districts like the one referred to a proportion of the children do not attend school, and illiterates are not uncommon. The education given is often of a poor type, especially in small schools; the low salary paid does not command a well trained and able teacher. The children of more than ordinary intelligence who happen to attend these schools are seriously handicapped, while the education of the others does not rise above a very low level. The present system of inspection affords room for abuse by unscrupulous teachers. A succession of such teachers has robbed a village of the efficient education of its children for 14 years. In the schools with hard working conscientious teachers good results are obtained. Occasionally competitors are found for the County Council scholarships; the children of the teachers form a large proportion of the successful candidates. There is a general opinion that the education now given is far below the standard reached a decade or so ago. This lack of confidence is being increased at the present moment by the institution of school gardens, &c.

Requirements.—A *System of Education* that ensures to every child a thorough grounding in the three Rs; that not only fits children for a rural life but those who will earn their living in other spheres; that will to a great extent give a rural child an opportunity to acquire equal attainments to those of the town child; that

will assist the rural child to attain whatever position in life his ability warrants, whether in connection with rural life or not; that makes it impossible for any child attending school to miss the education that is its birthright; that ensures for the individual child the development of its intelligence.

Suggestions.—That teachers in elementary rural schools, in addition to being better qualified to give general education, should be trained to give initial lessons in chemistry, physiology, botany, principles of agriculture, and horticulture. That a large proportion of the writing, reading and arithmetic lessons should be on subjects and in terms connected with rural life. That simple land measuring should be taught to boys.

That some system of independent periodic individual examination of the scholars be instituted.

That the results of these examinations be given to the parents of the children.

That parents have the opportunity, and be encouraged to discuss their children's capabilities with the teachers, education authorities, and in the case of scholarships, with the inspectors.

That a system of record cards be instituted on the lines of the medical examination cards, on which would be entered at regular periods the conduct and attainments of the scholars.

That parents be assisted where necessary to obtain the education their children require to develop their special abilities by scholarships of sufficient value.

(b) NOTE BY MR. COWAN ON THE SECOND REFERENCE.

I doubt if, at present, I have any definite opinions on the subject of the reference made to your Conference by the two Boards. One is rather in the position of an observer who has been collecting information for some years. I am certain that it would be unwise to teach agriculture proper in any school to boys under 16 years of age, whatever importance may be attached to providing opportunities to boys between the ages of 12 to 15 to become acquainted with the sciences underlying agriculture and horticulture and for instruction in manual work and gardening of an educational kind. At present in this county (Hampshire) I do not find much evidence of the need for providing special schools of this kind. Some movement, however, is in progress and one or two of the smaller Grammar Schools, such as at Alresford and Odiham (for boys and girls), and at Basingstoke (for girls), are following a general educational course, with practical subjects included. With the exception of the Girls' School named, where botany, nature study, and gardening are the special subjects taken, these special subjects are taught by Staff Teachers sent by my Committee, and the indoor curriculum is made to bear on the manual instruction and the gardening.

The question was seriously considered by the late Technical Instruction Committee at the time the Farm School was started and since, but it was decided to keep the school for boys who had reached 16 years. I am sure whatever may be arranged in the future for boys within the ages named we could not successfully work the Farm School with younger boys; the operations of ploughing, hedging, milking, farm carpentry and cheese-making are beyond the physical powers of younger boys.

One fact of importance may be mentioned, namely, that in 10 years we have not received more than half a dozen applications from small farmers, and not one from any farm labourer to admit boys under 16 years, and among these few cases the boys were nearly 15.

The Committee have not yet started any school on the lines indicated in Professor Sadler's report, page 99; but at Eastleigh—see pages 96-98—a school will be built this year for boys and girls of the ages mentioned, 12 to 15, but modified in some details to meet the new factor in the case, namely, the recent influx of the engineers from Nine Elms.

Finally, may I say that our difficulty at the Farm School has not arisen from boys coming with an insufficient knowledge of agricultural affairs but from a lack of good general education to the point sometimes that they are unfit to follow the elementary, though essential, science instruction provided.

I should like to mention one experiment we have tried in quite a small rural district. We arranged for six or eight boys between the ages of 12 and 14 to be instructed under a woodman in hurdle-making two afternoons a week. I inspected the work and thought the boys were not strong enough for what was required, and to

be candid it was not clear that the instruction could be made educationally sound in the circumstances. One of the boys said he would like to continue in that line after he left school. As a preparation for a boy's life-work it seemed to me to fall short of general carpentry in educational effectiveness.

I believe that when we change the curriculum of the Elementary Day Schools to include more practical subjects such as gardening, manual work and cookery, parents will be more likely to see the advantages of keeping their children longer at school, and that we shall be driven to the position of providing, here and there, tops to these schools in the way Professor Sadler conceived. At present the idea, so far as concerns rural districts, is a long way in front of public opinion in Hampshire.

(c) NOTE BY MR. J. L. GREEN ON THE SECOND REFERENCE.

There is at present no place in the system of rural education generally in this country for giving to boys leaving Elementary Schools a three years' course in the theory and practice of agriculture, together with continued general education.

There is, however, one such school with which I am somewhat acquainted, and that is the Dauntsey Agricultural School at West Lavington, in Wiltshire. I desire to call the attention of the Conference to the method of its foundation, as well as to the instruction given. On the former point it will be seen that the school owes its foundation to the charitable intention of a long-deceased gentleman of the name of William Dauntsey, and the subsequent interest and generosity of (in the main) the Mercers Company. The County Council also assists. The school gives an education in the theory and practice of agriculture, together with general education to boys after they have left the Elementary Schools.

I desire also to make some observations on this class of school.

In the first place, I do not think such schools will be serviceable to the children of our agricultural labourers except in rare instances, and then practically confined to the children in the immediate district where the school is situated. In my opinion, no matter how much financial aid may be given to the parents of such children with the view of securing the attendance of their sons, the results will be largely negative, and therefore unsatisfactory.

The children of the agricultural labourer must, I feel, be got at in the usual Elementary Schools by means of some such Bill as the Agricultural Education in Elementary Schools Bill. A good deal has been done, in the most satisfactory manner, and more or less on voluntary lines, in the carrying out of the objects of the Bill in several districts, and there is abundant testimony that such voluntary effort is deserving of financial and other encouragement at the hands of the State. To put this Bill into practical operation will not interfere with the general education which should, of course, be given in an Elementary School.

My second observation, however, with regard to the class of school contemplated in the reference is altogether of a praiseworthy kind. I think, for example, that such a school is admirably fitted for the sons of farmers, and that farmers would be willing and pleased to have the opportunity of sending their children to it. At present, such children, if they go to school at all after the elementary stage, go to schools which by no stretch of the imagination can be said to fit them for a career on the land, and yet that is precisely the career to which they are naturally called, and from which it is, as a rule, no pleasure to their parents to see them depart. I am not interested in seeing the sons of farmers specially fitted for a commercial career, but if such sons take more to such a career than to farming, then the class of school under notice will in no sense prove more disastrous to their chances of success in life than the Secondary or Higher Schools of to-day, and which latter, in turn, do not give the education which farmers usually would prefer that their sons should receive. The balance of advantage to the nation, no less than to the farmer, is that the latter should be provided with schools for his sons of the kind contemplated in the reference rather than be compelled to send his children to Secondary or Higher Schools, which give practically nothing but a commercial education.

I do not say anything here regarding the existing agricultural colleges and agricultural institutions, or to the courses which may be taken at certain of the Universities. These have their advantages, especially for the better-to-do farmers' sons and for the sons of landowners. On the one hand, the average farmer's son of to-day will finish and does finish his education at 16 or 17 years of age, and, on the other hand, I am strongly of opinion that it is inadvisable to send the sons of farmers

to the foregoing agricultural colleges, agricultural institutions, or to University courses until they are quite 16 or 17 years of age. These various institutions, therefore, in no senses compete with—and should not be considered as competing for the pupils or students who go to—the class of school alluded to in the reference. That kind of School should be the natural feeder of the agricultural institutions in question.

A third observation concerning the class of school alluded to in the reference may be made. I am, for instance, fairly convinced that this school would be attractive to large numbers of townsmen throughout the kingdom.

For some years we have been familiar with the cry of “Back to the land,” and although thousands of urban people make it without really knowing what it means or the anxieties it involves when seeking to give personal and practical effect to it, yet statesmen would be well advised to give some further heed to it of an educational kind.

Scarcely a month passes but what I am asked (as Secretary of the Rural League, and as one who has studied the agricultural conditions of this country and of continental countries for many years with great care) by some townsman how he can get his boy or boys on to the land. I am compelled to advise such parents in a sense which I am sure invariably disappoints them. The youths in question are about 18 or 20 years of age. They have had a fairly good education as a rule; of course, a “commercial” one. They have left school at 16 or 17, and then have spent a couple of years or so in an office, at the end of which time they have come to the conclusion that a clerical life or other indoor occupation offers no advantages or satisfying position to them. In many cases considerations of health become added to the reasons mentioned. These young men find there is little chance of settling down in the towns, where the expenses of setting up a home, combined with, I think, the extravagance or luxuries of living—a much too common feature in the town life of to-day—are against them. It is no wonder that the young men in question—some of the best in sympathy and in spirit we possess in the whole country—and especially their parents, welcome the cry of “Back to the land.” It seems cruel to an adviser to tell the young men to stick to the town life they understand, rather than at 18 or 20 to begin to learn the very elements of an occupation from which, even if successful and after much training, they can reap no satisfactory reward for many years, during all which time they are a considerable drain upon the purses of their parents and an increasing anxiety to them at a time of life when the parents themselves are thinking that they should be relieved of every expense and of every worry.

I revert, however, to the statement already made that “I am firmly convinced “that the school in question would be attractive to large numbers of townsmen “through the country.” I repeat this statement. As it is, when a boy has finished elementary school work, or has passed his Junior Cambridge Local Examination, he is pushed on to the Senior Cambridge Local Examination work or to studies of a similar character or degree; all of which tend to fit him for a commercial or scholastic career. Many urban boys, too, are sent to a boarding or other school in the country where the education is to all intents and purposes the same. Now, I am sure that if town parents generally were aware that there are schools in existence which, whilst giving a good sound general education from, say, 14 up to 16 or 17 years of age (the present limit of the school age of such parents’ children), also give instruction in the theory and practice of agriculture, and with a bias in the direction of such agricultural teaching, they would take advantage of such schools in an enormous number of cases. If for no other reason than for the success which I am convinced would attend the adoption of a proposal of this sort on the part of townspeople, I should be an advocate of this class of school. The times are all favourable, public opinion is ripe for the carrying out of such a proposal.

The only other observations I wish to make are:—(1) That if a start were made with this class of school, the cost should be placed upon the public exchequer and not upon the local districts; (2) that the fees payable by parents should be of the lowest possible description; (3) that a wide system of scholarships should be available. Perhaps I may add, on the last point, that the scholarships should be both local and national. The national ones should be of higher value and honour, and given through the Board of Education or Board of Agriculture, just as we give “National Premiums” for the encouragement of the production of thoroughbred horses. There is no better thoroughbred than a well-mannered child, thoroughly equipped for life’s

battles with an excellent education. The local scholarships should be given by the boroughs and counties, much of whose funds at present, especially in the case of the former, are, in my judgment, wasted in the matter of scholarships.

After all this is done, there still remains the problem of the education of the agricultural labourer's children. I cannot think that the schools contemplated in the reference will be of any real or general service to this class of children. These children must be got at by other means, as to which, however, the Reference precludes me from considering. Nor will such schools apply to the race of small holders, because such a race does not exist. Small holders exist abroad, and (especially in France) schools of the sort under notice are highly advantageous to such cultivators of the land.

(d) NOTE BY MR. HOUSEHOLD ON THE SECOND REFERENCE.

My answer to the question which the Board have referred to you, is that here and now, in my opinion, there is no place for Schools giving to boys leaving Elementary Schools a three years' course from the age of 12 or 13 in the theory and practice of agriculture, together with continued general education.

My reasons are several :—

- (1) The labourer cannot afford to keep a boy at school till he is 15 or 16.
- (2) The farmer in this county has not much belief in any attempt to teach the theory and practice of agriculture in school.
- (3) Anybody, whether labourer or farmer, who could afford or was willing to let a boy remain at school till he was 15 or 16 would, I think, at present prefer a Secondary School to a school of the type suggested in the reference.

My own inclination would be to encourage experiments leading in this direction in rural Secondary Schools before attempting to decide whether it will or will not be possible hereafter to establish schools of the type suggested.

An experiment is being made at the Grammar School, at Hanley Castle, in Worcestershire, as you probably know. The science is given an agricultural bias, and the theory is put into practice on plots of ground cultivated by the boys. I do not think, however, that they go so far as professing to teach the theory and practice of agriculture. I have no doubt that some of our Secondary Schools will be encouraged to remodel their science teaching on these lines. The science lessons gain, of course, in interest and meaning, and indirectly, if not directly, a foundation is laid for special agricultural teaching.

I should like to see the Board definitely encourage something of this kind in rural Secondary Schools, and I do not think a final answer should be given to their question till we know more about the results of such work.

(4) We certainly do not as yet dream of teaching the theory and practice of agriculture at Berkeley. That school has workshops for wood and iron work and has gardens attached. It has also a simple laboratory. Our reason for providing the laboratory was the desire in the neighbourhood for opportunities of a rather more advanced education than that given in the ordinary Elementary School. Boys have been in the habit of coming to a lower grade Public Secondary School in Gloucester, and it was thought that some of them would remain at Berkeley and get what they wanted up to the age of 15. Of course it still remains to be seen whether they will do so. The general aim at Berkeley will be analogous to that of Stroud. Of course there will be very much less art teaching at Berkeley—no more in fact than the ordinary drawing. Nature study allied to the garden work will have a prominent place, and the laboratory course will be framed in connection with it.

I hope that the foundation thus laid will prove useful when the boy leaves the Day School and passes on to Evening Classes, where he will come into direct touch with agricultural teaching.

Shortly, then, I do not think that there is at present any place in Gloucestershire for a school of the special type suggested, but I should not like to say that in five or six years' time there will not be room for it. So much depends on the success of experiments still in their early stages, and on the result which they may have upon the views of the farming class.

(e) NOTE BY MR. KEEN ON THE SECOND REFERENCE.

In 1903, when we first took over Elementary Education, I made an effort to develop certain of our rural schools, which were of a better type than their neighbours, or were more conveniently placed, having regard to neighbouring schools, as "District Higher Grade Schools" with a view to providing exactly the type of education which you have in your mind; but I am sorry to say that the effort failed, principally owing to local jealousies between villages which were shared by certain managers and teachers at the time. There was also the suspicion of managers of the selected schools, either that the rates of their particular parish might be increased beyond purely parochial necessity, or that the managers themselves would be called upon to bear special expenses which ought to be borne by a district rather than by the immediate parish alone. My original hope was that we might be able to induce the upper standard children to assemble at these District Higher Grade Schools, where a specially qualified staff would be maintained, supplemented by visiting teachers in special subjects, with a view to receiving instruction in matters of practical interest in agriculture, together with such elementary science as would bear on rural pursuits generally. Eventually we found it necessary to do the best we could with each particular school, and I am glad to say that we now have—for the size of the county—an unusually large percentage of schools where practical classes are established, conducted by permanent members of the teaching staff, though, naturally, the standard of work attained does not compare with what I had originally hoped to reach in District Schools.

I hold most strongly that agriculture should not be taught to young boys; but there is plenty of work which a rural Higher Elementary School can do by way of providing further elementary education beyond the work of an ordinary school, together with teaching in elementary science and practical arithmetic—more particularly as bearing on rural occupations; always such subjects as woodwork and gardening; also forged iron work, where possible; and basket work in fruit-growing and market-gardening districts. Other subjects which could be taken in short Courses during the second and third years of such a three-year course as you mention are—bee-keeping, poultry-keeping, pig-keeping and bacon-curing, veterinary hygiene, dairy work, hurdle and gate-making, thatching, hedge layering.

Attached is an extract from the prospectus of our County Boys' School which we established in 1900, as it provides an agricultural science course for boys up to about 18 years of age, distinctly omitting the teaching of agriculture, as such. Mr. A. D. Hall, of Rothamsted, on the occasion of the "Full Inspection" of the school three or four years ago, remarked that it was the nearest approach to his ideal of what an Agricultural Science School ought to be that he had met with—a very high compliment from such an authority.

If, in the type of school you now have under consideration, any attempt is made to teach practical agriculture, I feel confident it would be a great mistake; but, on the other hand, such a school—whether called a District Higher Grade or a Rural Higher Elementary School—catering for the further education of boys beyond 12–13 would do an excellent work by giving instruction in every subject, or branch of rural life, that lends itself to class teaching. I am thoroughly convinced that schools of the kind should be established wherever possible, and it was one of the greatest disappointments I have met with when it was found impossible to realise completely my proposal to develop what I then called "District Higher Grade Schools," designed to give a two, or three, years' course to boys who had finished their ordinary Elementary School career, the instruction to be given a distinct practical and agricultural bias.

CAMBRIDGESHIRE COUNTY SCHOOL.

EXTRACT FROM PROSPECTUS.

The School is specially designed to meet the requirements of boys who are likely to follow industrial and commercial pursuits.

The course of instruction is divided into two parts:—a junior course common to all boys on entering the school, and a senior course in which special subjects will be studied preparatory for one or other of the following occupations:—(a) Farming, market-gardening, fruit-growing, &c.; (b) Building, engineering, draughtsmanship, surveying, &c.; (c) Business and commercial life, including the Civil Service.

The junior course, which must be taken by all boys on entering the school unless they are already sufficiently advanced in the necessary subjects, may occupy one or two years, according to each boy's previous education, and will include :—

Holy Scripture.	Geography and History.
Natural Science.	French.
Mathematics.	Book-keeping.
Drawing.	Singing.
English Composition.	Manual Training—Woodwork and Gardening.
English Literature.	Physical Drill.

The senior course will be in three divisions :—Agriculture, Building and Engineering, and Commercial.

The instruction in each division may be extended over several years. It is not expected that a boy will study at any one time all the subjects in any course. Each course will be carefully graded. Other studies may be introduced :—

A.—*Agricultural Science.*

Natural Science, Mathematics, and Drawing.
Elementary Building or Machine Construction.
Land Surveying.
Book-keeping.
Manual Instruction—Woodwork.
Horticulture.

B.—*Building and Engineering.*

C.—*Commercial Knowledge.*

Whilst no actual trade or calling is taught, no effort is spared to give the instruction a most suitable, useful and practical character preparatory for the leading occupations in the neighbourhood. For instance, no attempt is made to teach farming—that must be learnt practically on the farm, and in everyday life—but boys are taught, in the agricultural course, the properties of soils; the principles of mechanics, plant life and animal life; plain carpentry; and how to set out a building, or carry out a simple piece of farm engineering.

The session extends from September to July, and is divided into three terms of about 13 weeks each. The holidays are short at Christmas and Easter, and throw as much as possible into the summer, when boys can be very usefully employed at home in many ways and learn something of the practical side of life. The school hours are from 9.15 to 12.15 and from 1.30 to 4.

The fees are 2*l.* per term; including the free use of class books, stationery, and materials for all ordinary school purposes. Boys residing outside the administrative county of Cambridge, 3*l.* per term.

Minor and intermediate scholarships awarded by the Cambs. County Council are tenable at this school.

Boys who have attended the school, and who are resident in the county or borough of Cambridge, are eligible to compete for the major scholarships of the annual value of 30*l.*, offered by the County Council, and tenable for not more than three years at some place of higher education (*e.g.*, Cambridge University, London University, the University of Wales, &c.).

Two agricultural scholarships, each of the value of 25*l.*, are offered for competition among boys who have attended the School and are not more than 17 years of age, tenable for two years at the Cambridge University Agricultural Department, or at an Agricultural College approved by the County Education Committee.

(f) NOTE ON PROFESSOR SADLER'S REPORTS ON HIGHER EDUCATION IN CERTAIN COUNTIES.

In his reports on Higher Education in the Counties of Derby, Essex, and Hampshire, Professor Sadler proposes the establishment of Higher Elementary Schools in certain small towns or groups of villages. (See "Essex," pages 65–7; "Derbyshire," page 53; and "Hampshire," page 99.) He advocates as essential that these schools should "aim at giving a good general education not prematurely specialised." The subjects taught should be English, history and geography, nature study combined with practical outdoor work in field or garden, linked with the teaching of drawing, elementary mathematics, elementary practical physics, class singing,

physical exercises, and the laws of health. French should be an optional subject, but boys intended for industrial life should substitute for French, applied geometry and arithmetic, and the elements of mechanics. They should, in their manual work, reproduce objects from working drawings.

Professor Sadler only advocates "specialisation in view of future employment" in the last year of the course (14 to 15). During this year, girls should take a household management course. In rural districts there should be plenty of nature study and gardening taught, as well as keeping accounts, studying market reports, and (for boys) making simple repairs in machinery.

The chief differences between such a H.E. School and a "Middle Secondary School" would be the exclusion of Latin, a larger amount of handicraft and the modification of the curriculum generally, in view of the pupils entering on practical life at 15 instead of 17.

He points out that in order to start these schools successfully the Board's Regulations will have to be altered and larger grants given as in Scotland.

APPENDIX IV.

SUMMARIES OF EVIDENCE.

(a) **Mr. Dymond.**

Witness stated that the only schools which he knew of the type indicated in the second reference were Reformatory and Industrial Schools, concerning which particulars could be obtained from the Home Office. He considered that there was no difficulty in boys from these schools getting places on the land. Farmers were very keen to get them, as the boys' characters were very considerably influenced by the keenness developed in their agricultural work. The work taught at the schools was not so much theoretical as practical work, and consisted of ordinary farm jobs. Witness thought that the boys got adequate wages, and not less than other boys would because they came from Industrial Schools; it was an advantage to have been at such a school, because they got employment quite easily. Witness instanced the Reformatory at Poulton-le-Fylde (Lancs.) as a good example of agricultural work. Asked whether there were any Public Elementary Schools in which agriculture was taught, witness stated that there were one or two schools in Monmouthshire where instruction in hedging was given by a visiting teacher. The Chairman suggested that there was nothing in the Code to prevent an Elementary Schoolmaster suitably qualified taking his pupils out of the school and giving such instruction. Witness stated that such an experiment might be tried, provided that H.M. Inspector was satisfied that both teacher and subject were suitable. The only schools known to him which had applied for approval under paragraph 4 (a) of the Code of a special syllabus were the schools in Monmouthshire already referred to, and a school in Norfolk in which thatching was taught to Elementary School children. Witness stated that the special grants for gardening and dairying did not extend to field work, and probably handicraft could not be stretched to include agriculture: handicraft could, of course, be given a rural aim, as in Buckinghamshire.

Witness did not know of any Higher Elementary Schools in which agricultural teaching was given, nor was he aware that there was a Higher Elementary School in a rural district, though it would be quite possible to establish such a school. It was suggested to witness that a Higher Elementary School with a rural bias would be the same as a centralised rural school in Canada, but he considered that it would be rather different, a centralised school probably consisting of the "Tops" of various Elementary Schools.

The only Secondary Schools known to witness in which agriculture was taught were Barnard Castle, Brewood, and Dauntsey. It was suggested to him that the curriculum at Dauntsey was less agricultural now than it was in the past, but he thought that only poultry-keeping had been dropped, and this was mainly because the Governors thought the arrangement unsightly. He thought that practically all the boys took the whole course, which included practical field work; they also visited

neighbouring farms. The boys attending the school were mostly the sons of large farmers and were almost all boarders. Witness did not consider that labourers' sons would benefit much by being at the school, and even if they did, the course would not be useful to them, as they would not have enough capital to start farming themselves. With regard to the agricultural side at Barnard Castle, witness stated that only a small proportion (say) 12 out of 200 in the school attended it. One acre of land was farmed and visits to neighbouring farms were paid. The agricultural side had been going for 21 years. The school at Brewwood had an agricultural side larger than at Barnard Castle. In reply to a question whether any of the boys went to an Agricultural College, witness stated that Staffordshire awarded agricultural scholarships, and the scholars mostly came from Brewwood. Witness was asked whether there were any agricultural sides to Secondary Schools which had failed, *e.g.*, Ashburton. He replied that Ashburton had scarcely failed, it had become a different type, a school with a rural bias and one in which practical teaching had been given up. There were some schools with a rural bias in the Eastern Counties. Schools with a rural bias were growing in number, but there was no tendency to introduce practical agriculture. Asked whether there were any schools in Wales in which agriculture was taught, witness named Welshpool. At Newtown there was much the same thing, and at Bottwnog, in Carnarvonshire, they made a speciality of gardening. Other schools teaching agriculture which received aid from the Board of Education were two recognised under the Regulations for Technical Schools: Edgeworth (Wesleyan) Farm School and Barnet Farm Home for Boys; they were of a type similar to Industrial Schools, and he thought that the ages of the pupils ranged from about 8 to 16.

In reply to a question whether he knew of any cases of labourers' sons going with scholarships to Barnard Castle, Brewwood, or Dauntsey, witness said that there was always a possibility, but he could not say; Brewwood was the most likely place. He considered that Dauntsey was not a rural school of the type of the second reference, but was of a more advanced type. It was suggested that with regard to labourers' sons going to Brewwood and similar schools, the only opening for such lads would be as teachers or agents. He agreed that this was so, saying that they would not have enough capital to start farming. In reply to a question whether he knew of any Elementary Schools at which poultry-keeping was taught, witness stated that he knew two or three in Cheshire. He stated that many masters in Public Elementary Schools were experts in gardening and some in surveying. He did not know of any Elementary, Secondary, or Industrial Schools in which mechanics was taught to an extent which would fit boys to mend an agricultural machine. The Board encouraged this kind of work in Evening Schools; for instance, instruction in farm machinery was given in Gloucestershire.

(b) Mr. Austin Keen.

Witness had furnished the Committee with a note on the second reference (*see* Appendix III. (e)) which contained particulars as to the courses of study provided at the Cambridge County School for Boys, together with the fees charged, scholarships offered, &c.

In reply to questions by the Chairman, witness stated that he was of opinion that there was no place in his district for a school of the type contemplated in the reference. The fact that no wages would be given for work done on the land would prevent labourers' sons, as a rule, from attending such a school. The witness had not visited an industrial or reformatory school, but he thought the conditions of such a school made it difficult to draw deductions for general application.

Witness held strongly that agriculture should not be taught to young boys in a school course, and that it would be a great mistake to attempt to teach practical agriculture in the type of school under consideration. On the other hand, he said that a school catering for the further education of boys over 12 to 13 years of age was capable of doing excellent work by giving instruction in every subject or branch of rural life, subsidiary to agriculture, that lends itself to class teaching.

In 1903 an effort was made by the Cambridge County Council to develop certain of the rural Elementary Schools as "District Higher Grade Schools," the intention being to assemble at these schools the upper standard children from neighbouring

schools, and to provide for them instruction in matters of practical interest in agriculture together with such elementary science as would bear on rural pursuits generally. This effort was not successful.

The Education Committee, finding it impossible to establish a school such as described above, decided to improve as far as possible each individual school with the result that there are now a large number of schools in the county where practical classes are held, conducted by permanent members of the teaching staff. The effect of this was that boys remain at school longer than they otherwise would.

They had also been partially successful in concentrating upper standards in rural districts. In this connection the witness mentioned that at Great and Little Shelford School steps have been taken for several years to consolidate the upper standards from neighbouring schools, with a view to developing what might be called a Higher Grade Rural School. The managers have entered heartily into the policy of the Education Committee, and have supplied suitable premises for classes in woodwork, metalwork, cookery and laundrywork; and in addition gardening is taught.

Witness then gave a description of the County Boys' School, which was established in 1900 especially to meet the requirements of boys who are likely to follow farming, industrial and commercial pursuits. When the school opened it was attended by 40 boys; the number at the present time is 292, of these about one-third are taking one of the senior courses and are from 15 to 18 years of age. Six are taking the advanced agricultural course. So far as the agricultural division of the school is concerned it forms a link between the Elementary School and the Agricultural Department of Cambridge University, to which scholarships of 50*l.* each are provided. Although the school had been established only a few years the witness was able to give instances of boys who, after having passed through the school and taken a course at the University, had obtained excellent appointments as agricultural experts. Boys who had not gone on to the University had also obtained good agricultural situations.

In reply to supplementary questions, the witness explained that the boys taking the agricultural course at this school would usually be the sons of farmers. He did not think that any labourers' sons had been to the school. In his opinion the growth of the County Boys' School was largely due to the attention given there to practical work.

(c) **Mr. J. H. Nicholas.**

The Chairman referred to Professor Sadler's Report on Education in Essex, and witness stated that his Committee had endeavoured to establish a Higher Elementary School in a rural district, and handed in some printed suggestions drawn up by the Committee for this purpose. The scheme, which the Committee desired to try experimentally, had, however, not obtained support in the district where it had been proposed to establish it, and the effort had failed. The reason for this failure was chiefly the conservatism of the local people concerned, and financial considerations.

Witness gave some information with regard to the school which formerly existed at Bigods, near Dunmow. He was of opinion that the school was not a success in training children for agricultural pursuits, neither was it a successful attempt in co-education, partly owing to its situation three miles away from Dunmow.

He expressed the opinion that children intended to be farm labourers should go to work on the land at about 13 years of age, but that the sons of farmers should continue their general education up to the age of 16. He was strongly in favour of practical instruction being given in the Elementary Schools. He had visited the Industrial School at Chelmsford, attached to which were six acres of land. The boys there spent one half their time in ordinary school-work up to the age of 13, and one half in practical gardening, woodwork, &c. After 13 the boys spent the whole day in practical work, except about one hour during which they continued their ordinary school-work. Witness advocated a similar arrangement at Elementary Schools. Questioned by the Chairman as to whether parents would not be likely to object to such an arrangement and demand that if their children were devoting such a large proportion of their time to practical work they should be paid wages for their work, the witness replied that he did not think that would be so, and instanced the Royal Naval College at Osborne, where boys of 12 devoted a very large proportion of their time to practical work. If this could be done at Industrial Schools and at a school such as that at Osborne, he failed to see why it could not be done at

Public Elementary Schools. Witness also pointed out in this connection that the opposition which parents showed at one time to school gardening was scarcely ever met with now.

In reply to supplementary questions, the witness stated that his Committee had provided instruction in hedging, ditching, and kindred subjects at Local Technical Classes, but not at all at Elementary Day Schools. He was not in favour of such instruction being given to children at Elementary Schools, but would prefer to wait until after the children had left school. He was of opinion that if practical work and book work were given at the same time and in relation to each other a great improvement was made in book work. He expressed the view that there was no need of schools such as contemplated in the reference before the Committee.

(d) **Mr. J. S. Ballin.**

Witness said that he was anxious to see a farm and school established on national lines which would train boys in agricultural and allied employments, particulars of which were set forth in a print, copies of which he handed to the Committee and which he suggested might be assisted by the National Institution of Apprenticeship. He had received applications from lads who desired to be apprenticed to agriculture but he had failed to find a suitable farm where they could learn what was desirable. The boys would be aged from 13 to 16, mainly from the ordinary working-class homes. It was intended that ordinary education might be combined with a thoroughly practical teaching of agriculture, but the exact time to be devoted in the proposed school to each subject had not yet been fixed.

A farm bailiff and skilled men would be necessary, and suitable teachers would require to be fairly paid. He thought that the productions of the farm would be profitable. His view was that the land is not yielding half the value that it ought to yield, and that if agricultural employments were more remunerative they would attract numbers of the surplus dwellers in towns. In addition to agriculture, instruction would be given in packing, marketing, &c.

He thought that the most practical method was to establish a farm where the scholars would live in, and that their parents would be quite satisfied without wages so long as their boys and girls were provided with their keep, lodging, and training.

It was proposed that no fees should be charged.

The boys would come mostly from the towns, as he believed that a considerable number of such town boys would be willing to take up agriculture and go through the course of training as suggested.

He had not put his proposal before any of the County Councils, as he looked to establishing the school by voluntary means with the aid of Government grants.

He agreed with the second reference if the schools were for town children.

(e) **Mr. T. D. Robertson.**

Mr. C. Turnor stated that he had been to the Redhill Philanthropic Farm School and was anxious to know how far it was typical of Reformatory and Industrial Schools in which agriculture was taught. Witness said that it was the largest of the kind, but was not typical of such schools, as the industrial teaching was rather more highly developed than the agricultural instruction. He handed in syllabuses of agricultural teaching which was given at (a) Norton Boys' Home; (b) Church Farm, East Barnet; (c) Netherton Training School; and (d) Boys' Training School, Weston. He had picked these out as being good instances of the schools in different parts of the country in which agricultural teaching was well developed. He stated that in his experience the town-bred boys took to country life very readily, and instanced cases of London boys being very happy in agricultural work in Dorset, Norfolk, and Wiltshire. When boys left the schools they often took up farm work as labourers, and farmers were glad to have them. The usual plan was for them to go to small farmers, in whose houses they lived as one of the family, receiving small wages. There were a large number of London boys with farmers in Wales. Some of these Welsh farms were very suitable for boys, because they were usually small and the farmer worked himself and was able to instruct the boys, who did not go only as cheap labour, but rather as apprentices.

Witness then referred to the occupation of boys who left Reformatory and Industrial Schools in 1906, 1907 and 1908. Out of a total of 11,723 who left, 1,533 were in farm service at the end of 1909 and 87 were gardeners. A large proportion of these were placed on Welsh farms. He was inclined to think that the

instruction given in the schools in agriculture compared favourably with instruction in any of the trades. The Superintendent and School Masters generally supplement the instruction given by the farm bailiff. He did not think that the attempt to make boys highly skilled agricultural labourers was sacrificed to employing them in routine labouring work, with a view to making the farms of the schools profitable. Of course this depended to some extent on the financial condition of the school, and the support it got from local authorities and others. They had to make the farm as self-supporting as possible. During the last four years the Home Office had impressed on the schools the natural alliance between the schoolroom and the other occupations. Better syllabuses in agriculture were submitted every year, and better instruction was given. In the better schools boys worked on the farm in classes, rather than by themselves, as labourers, but there were always a certain number of boys who could be trusted to work practically independently, especially in the care of stock, milking, &c. More attention is given to linking up the practical work with the work done in the schoolroom. Examinations (oral) are now held on the land, as well as in the schoolroom. Of course, the schools could not afford agricultural instruction of the type found at agricultural Colleges, but the level of the teaching had certainly been raised in the last few years. In Monmouthshire the County Council agricultural instructor gave systematic instruction, which was very admirable, and an attempt was made to get other County Councils to do this kind of work. He thought that work on the land was the best future for boys from these schools. Witness passed round some note-books made by boys in agricultural classes which had been taken at random as a fair sample of such work, and attached special importance to the accounts kept by the boys in connection with plots allotted to them to work on strictly business lines.

Each school tried to establish a connection with farmers in the neighbourhood, and in some counties the Superintendent attended hirings. The Reformatory Schools used a Certified Schools Agency which had offices in Liverpool, Birmingham and Bristol, and the London County Council had an agent in South Wales. No doubt, in future the Labour Exchanges might help farmers to get more in touch with the schools, but he did not know whether anything had yet been done in this direction. Boys usually became labourers, but he came across from time to time instances of lads who had gradually worked their way to become small tenant farmers. He thought that if boys were offered jobs on land more frequently, they would readily take them. He did not think that at the age at which they left school they were sufficiently far-seeing to prefer industrial work to farming, on account of higher wages, but the parents, of course, wanted the boys home and were a difficulty. Witness said that he was not himself an agriculturist, but he was most interested in this side of the work because he thought that it was what the country needed most. There was nothing more reforming than work on the land, especially if it was intelligent work. Sometimes boys who were at school were hired out for the day in very busy seasons by neighbouring farmers. This often set up a connection with the school which was useful afterwards.

At the Stoke Farm Reformatory, near Bromsgrove, intensive gardening had been undertaken with some success, and an attempt was being made more or less successfully in several other schools.

(f) **Mr. R. N. Lewis.**

Witness stated that he was certainly of opinion that there was room for a school of the type contemplated by the second reference.

His school (elementary) was situated in a purely agricultural district, and he spoke from 34 years' experience. All the best boys after they leave the school go away from the land and go into the towns, owing principally to the lack of interest in farm work. He had traced 74 of the boys who had left his school during the last 15 years. Of these, 14 did not go to the land, the remainder may be classified as follows:—

Labourers' Sons.

Left School to go on land	-	-	-	-	-	41
Number of above who left land and are now in other occupations	-	-	-	-	-	10

Farmers' Sons.

No further schooling	-	-	-	-	-	15
Attended Grammar School for about a year	-	-	-	-	-	3
Attended Midland Agricultural College, Kingston, for one term	-	-	-	-	-	2

Witness was of opinion that at the present time boys who remain on the land are not properly taught the processes of the farm, with the result that there is such a shortage of expert workmen. In his district one rarely saw an expert hedger or thatcher under middle age. If boys cannot be taught on the farm they must be taught at a Farm School. He then described the type of school he would like to see established as an experiment. He thought the farm should be not less than 100 acres. The farmhouse would have to be adapted. In his opinion the cost would not be very great, as the farm would almost pay for itself. He suggested that the school would be attended by about 20 boys from 14 to 16 years of age who would have board and lodgings free. Parents would have to sacrifice whatever they now make out of a boy of similar age, and would also have to provide him with clothes.

Such a school would provide for the sons both of farmers and labourers. At first, as an experiment, one school would be established for a county, but later on, if the experiment proved a success, a medium-sized county would have two or three. His idea was to teach the boys all the operations of the farm and correlate this work with the literary instruction given in the class room.

In his opinion it is often possible, by teaching a boy the use of tools and gardening, to get him to take a greater interest in ordinary school lessons. The practical work done in the Elementary Schools in this county was likely to give the boys more interest in agriculture. In Lincolnshire the wages earned on a farm by boys just left the Elementary School and those of *young* men (single) were quite as high as those to be obtained in the towns. So this was not the reason the boys left the land. The reason boys left the land was the lack of interest and lack of prospect for them in agriculture. There was no prospect for boys owing to the extensive system of farming.

Examined as to centralised Continuation Schools as a possible alternative to the school he had suggested, witness said that the difficulty with Continuation Schools was the distance that the pupils had to travel. Another objection is that boys would not be taught on the farm, and there would be no connection between literary and practical work. In reply to supplementary questions witness agreed that he contemplated two types of schools: (1) the central farm school, the students from which would eventually hope to become farm bailiffs, small holders, or farmers; (2) Continuation Schools, the students of which would probably remain farm labourers. At the latter school he would prefer instruction to be given all the year through rather than during the winter months only.

In reply to supplementary questions, witness admitted that his theories depended largely on a great change in economic conditions, especially as regards intensive cultivation and the extension of small holdings. He did not think there would be any difficulty in inducing parents to allow their sons to remain at a school such as he had described until they were 15 or 16 years of age.

(g) **Mr. A. H. H. Matthews.**

Witness said he was not in favour of establishing schools such as are contemplated by the reference. His objection was that boys would be kept at school too long. He would prefer centralised Continuation Schools, but the conditions of such schools would have to be left open. He drew the Committee's attention to the recommendation of the Central Chamber of Agriculture, that agricultural education in each county should be under the control of a special Committee of the County Council. Such a Committee should be consulted as regards the establishment and organisation of Continuation Schools in rural districts.

Witness was of opinion that large farmers are less opposed than they used to be to the education of labourers. The change with smaller farmers was not so noticeable.

In connection with a remark made by the previous witness (Mr. Lewis), Mr. Matthews said that farmers were not as a rule much impressed by School Masters possessing diplomas and certificates unless they showed themselves possessed of practical knowledge as well. Farmers would have to be educated up to utilising boys who had received additional education such as was contemplated. He thought that farmers would be willing to pay higher wages for persons qualified to do better work. He had known several cases in which this had been done.

(h) **Dr. J. W. Robertson.**

Witness stated that, while he attached great importance to the teaching of nature study, he did not think that the "theory and practice of agriculture" could be taught at school to boys of from 12 to 16. He did not consider that the theory of agriculture as a business could be taught to boys under 14 or 15, and stated that, in Canada, they did not find it possible to make agricultural practice a part of the ordinary school course. School instruction should, wherever possible, be linked up with the farm work that the boys did at home. Instead of teaching agriculture as a subject, he would prefer courses in nature study, together with the establishment of school gardens, and visits to neighbouring farms. In Canada farmers generally were greatly in favour of the children of Elementary Schools being taken for lessons to the fields and crops of farms in the district.

The Chairman drew the attention of witness to the paragraph in the draft report of the Committee dealing with Centralised Rural Continuation Day Schools, and asked if such schools had been tried in Canada. Witness explained that Sir William Macdonald founded as an experiment four Consolidated Rural Schools. These schools were attended by children, brought in vans, from an area which would ordinarily be served by five or six Elementary Schools. The education provided was of a different character from that provided in the ordinary Elementary Schools. Manual training, household science, school gardening, nature study, music, drawing, and physical culture were all taught by specially trained teachers. It had been found that children taught in this way learnt to read much earlier than children taught in the ordinary way and made immensely greater progress in their general education.

At certain of these schools, courses were provided for boys who had left the Elementary School, but who went to the Consolidated School for the special course. Dr. Robertson described such a course at the Macdonald Consolidated School, Hillsboro, Prince Edward Island. A special teacher was engaged for the course, which was attended by 20 boys five days a week for four months. During that time the boys devoted their whole time to school work. This course might be described as an elementary course in agricultural operations, instruction being given in soils, seeds, live-stock, and manures, and visits to farmers were paid, which illustrated what the boys had been learning at the school. It was possible to build on the previous experience of boys, as they were, without exception, the sons of farmers and had helped their fathers on their farms. This return to school from agricultural employments had proved a great success, and had had a very marked influence not only on the boys themselves but on the attitude of the whole neighbourhood towards education generally.

Sir William Macdonald's experiment of the Consolidated Schools had done much to raise the standard of teaching in all schools, but, owing to the necessity for conveying the children, the cost was more than that of the separate smaller elementary schools. In certain parts of the United States Consolidated Schools had been found to be economical, but the circumstances, especially with regard to conveyance, in those districts were not the same as in Canada. There was no uniform age for leaving the Elementary Schools in Canada, and children left between the ages of 13 and 15. There was, however, less reluctance now to continue education to 15 than there had been, as farmers were beginning to see that the better trained boys did better work. The question which was being considered by the Committee was, perhaps, easier to deal with in Canada, because there was no class of men corresponding to agricultural labourers in England. Men employed on farms were either farming themselves or hoped to become farmers, and the boys were helping their fathers who had a special interest in seeing that they were well taught.

In the Elementary Schools instruction was given in nature study, including elementary science, and if the subject were properly taught, children could begin it and make real progress in it from eight years of age. All the teachers, men and women, in training at normal schools took nature study as part of their regular course, and in Ontario selected teachers devote two months to nature study and agriculture at the end of the normal school course. The proportion of women to men teachers in the Elementary Schools was about 15 to 1.

In Canada some farmers were desirous that their boys should go to a school garden two evenings a week, and this was more feasible in summer than attendance at a day school for (say) two days a week. Even though at certain seasons of the year farm work lasts almost as long as the daylight, boys were able to attend Evening Schools

and profit by the instruction provided, because the subjects were correlated with their rural experience. Indeed, it had been found that boys who tidied themselves up for some mental work in the evenings did better farm work the next day than those who had been idling at home after the day's work on a farm was finished. It was the unanimous testimony of the teachers that where nature study was taught at Elementary Schools, the boys took a greater interest in rural life, but of course it was difficult to get teachers who were able to correlate all the literary work with practical work and with their rural pursuits.

In conclusion, witness stated that in the course of the inquiry now being conducted by the Royal Commission on Industrial Training and Technical Education, of which he is Chairman, it had been ascertained that there was a feeling among farmers in Canada that the ordinary paid teachers (the great majority of whom were women) were not adequate for providing instruction and training for rural occupations, and farmers appeared to be willing themselves to give one or two half-days a month for the purpose of supplementing the ordinary instruction, and especially for conducting children over neighbouring farms.

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

R E P O R T

OF THE

RURAL EDUCATION CONFERENCE

ON THE

CONSOLIDATION OF RURAL ELEMENTARY SCHOOLS.

Presented to both Houses of Parliament by Command of His Majesty.



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RURAL EDUCATION CONFERENCE.

REPORT ON THE CONSOLIDATION OF RURAL ELEMENTARY SCHOOLS.

1. The Motion proposed by Mr. Frederick Verney was changed by him to run as follows:—

“ With a view to improving the education given in Elementary Schools in rural districts, to suggest that the ‘ tops ’ or parts of the ‘ tops ’ of such Schools should in selected areas and as an experiment be consolidated.”

2. We have held two meetings to consider the above Motion and have examined Mr. Verney on the subject. A note of the evidence given by him forms Appendix I. to this Report.

3. We are aware that the principles underlying the suggestion contained in the Motion have been carried into practice to a large extent in several of the States of America and to a lesser degree in Canada and Australia. A considerable amount of information about the experiments in those countries is available in the form of pamphlets and in the Reports of the United States Bureau of Education; a summary of the information contained in them forms Appendix II. and Appendix III.

It will also be recollected by members of the Conference that Dr. Robertson referred to the Macdonald Consolidated Schools in Canada in the evidence which he gave before the Committee which reported on a suggested type of Agricultural School.*

4. It is no doubt of considerable interest to note that consolidation of Schools has been tried in those countries in a large number of instances and appears to have proved successful educationally and, in the majority of cases, financially also. While we cannot ignore the fact that the conditions which obtain in the United States and in Canada are very different from those that prevail in this country with regard to education in rural districts, and that the educational arrangements in those countries are not in their exact form immediately applicable to our own, we are of opinion that the principles involved in those arrangements and the policy and objects of the Canadian and American authorities convey suggestions of high value and urgent importance for our system of rural education.

We are also aware that consolidation of Schools or parts of Schools has been tried in this country in a few instances,† but the data at present available are not sufficient for us to be able to draw any definite conclusions.

The particulars which are given in Appendix IV. show that, although consolidation has not as yet been taken up to any marked extent in Scotland, some of the disadvantages of small rural schools are overcome by strengthening the staff of such schools by means of additional central grants.

5. Consolidation may take one of two forms:—

(a) all or some of the children from several Elementary Schools may be concentrated in a Central School and follow the ordinary Curriculum of an Elementary School;

(b) the older children only who have been specially selected may be concentrated in a Central School with a view to giving them some special form of teaching connected with rural life.

A School of the latter type would approximate to the Higher Grade Rural Schools referred to in paragraphs 13, 14, and 15 of the Report of the Conference on “ A suggested type of Agricultural School,”‡ and would, of course, be more expensive than the former.

We are of the opinion—

(1) that if consolidation of either of these types could be carried out it would ultimately secure higher efficiency as regards teaching, greater encourage-

* See Appendix IV. (h) of the Report of the Rural Education Conference on “ A suggested type of Agricultural School ” (Cd. 5774).

† See “ Principles and Methods of Rural Education,” paragraph 22, page 13.

‡ Cd. 5774.

ment to the best type of teachers to undertake and remain in rural posts, and provide fuller facilities for both elementary and higher elementary instruction for village children ;

- (2) that it would be difficult for Local Education Authorities to establish consolidated schools of the first type in those districts in which sufficient accommodation is already provided, owing to the opposition that might ensue from managers who are interested in the existing Schools, from teachers who may desire to retain the elder children, and from parents who may object to their children being obliged to travel considerable distances ;
- (3) that the introduction of consolidation would, probably, at the outset entail considerable additional expense and that, inasmuch as it would be of the nature of an experiment, Local Education Authorities ought not to be asked to defray this extra cost from local funds ;
- (4) that, if the experiment proved a success, it might be possible to use educational endowments for this purpose wherever such endowments are available ;
- (5) that, where the Local Education Authority and the Board of Education deem it advisable, old grammar or endowed schools which can no longer be made to serve a useful purpose on their present lines might be converted into modern high schools of a rural type and consolidated with the elementary schools within a certain radius, thus affording greater educational opportunities to the brighter children of eleven to sixteen years of age. Such schools might give more incentive to children to take advantage of the higher instruction provided ;
- (6) that in order to encourage children to attend schools of the second type bursaries might, in certain instances, be provided by Local Education Authorities.

6. We recognise the difficulties incidental to the immediate realisation of the reform in rural education suggested by the motion, and consider that—

- (1) it would be undesirable, in the first instance, to attempt anything more than an experimental application of the principle in this country, and that only under favourable conditions ;
- (2) it would be out of place to lay down any hard-and-fast rules indicating the circumstances in which consolidation would be advisable, inasmuch as it is only the Local Education Authorities who will be able to judge whether consolidation is desirable or likely to succeed in their area ;
- (3) any extra cost imposed upon Local Education Authorities which are willing to try consolidation as an experiment should be met by increased grants from the Central Government.

We desire, however, to express our agreement with the principle of consolidation and to record our opinion that great educational advantages might accrue from its adoption in suitable localities.

We recommend that the Board of Education be urged to allocate a sum of money annually for the purpose of enabling experiments in the consolidation of Rural Elementary Schools to be carried out.

A. W. CHAPMAN.

(Chairman of Committee.)

20th November 1911.

APPENDICES.

APPENDIX I.

MINUTES OF EVIDENCE.

MR. F. W. VERNEY.

Mr. Verney asked that he might change the terms of his Motion so that it should run as follows :—

“With a view to improving the education given in Elementary Schools in Rural Districts, to suggest that the tops or parts of the tops of such Schools should in selected areas and as an experiment be consolidated.”

He stated that his object in bringing forward the Motion was to supplement the Report of the Conference on a suggested type of Agricultural School, because he thought that in country districts the efficiency of education would be largely increased by consolidating the smaller Schools, or at any rate parts of them. He quoted from a Circular of the National Education Association, which was issued in February 1908. In that document it was stated that “there are 5,621 Elementary School Departments containing less than 60 scholars. The cost of maintaining these small Schools is much more than the cost of larger and more efficient Schools. A Return recently published by one large County shows that it contains about 50 Schools with less than 50 scholars, and 50 with over 250 scholars. The average cost of maintaining the smaller Schools was 3*l.* 13*s.* per scholar, and the average cost of maintaining the larger Schools was 2*l.* 5*s.* per scholar. Thus every scholar in the small Schools costs the ratepayers an average of 1*l.* 8*s.* each more than scholars in the larger and better Schools.”

There had also to be taken into consideration the quality of the teaching staff, as a small School could scarcely attract a competent Head Teacher. The educational loss, too, was very serious, as children could not be divided into classes according to their attainments, and they fell into large groups of very unequal mental development.

Mr. Verney then went on to give particulars as to the consolidation of Schools in America. He stated that there were in 18 States no less than 2,000 centralised Schools, requiring 11,000 waggon routes for the conveyance of their pupils. In Lagrange County, 30 small Schools had been closed and 428 children transported to a consolidated School at a net saving for the year of 1,340*l.*

He then referred to the Macdonald Consolidated School at Prince Edward Island, which was placed in a rural district without even a village. The children were brought from a distance of four or five miles to the School. This School took the place of six one-roomed and badly equipped Schools.

Mr. Verney then went on to say that he had collected some evidence at Wolverton in October of this year by inviting 40 or 50 teachers, School managers, and others interested in education, to listen to papers by the Education Officer of the Bucks. County Council and by the Head Master of the County School at Wolverton on the subject. In the discussion which followed, the main points which were brought out were that in small schools teachers could not deal effectively with the several standards of education, especially as in many cases one Certificated Teacher was responsible for all standards; that the children in the Elementary Schools generally learnt a great deal in the lower standards, and very little afterwards, the reason being that as a child gets older and into work which is more difficult, and more important, special and individual teaching is required, which, in the vast majority of Schools, the Teachers have not the time to give, and many children in the upper standards are simply “marking time,” and the cleverer and brighter they are the less does the end of their School life do for them; that the fault lies not in the Teachers nor in the children, but in the system, which wants reforming and supplementing.

A strong case could be made out for consolidation in Buckinghamshire, where in 14 Schools all the children were taught by one teacher; and in 19 Schools all the children were taught by one teacher and an assistant.

To attempt anything like a general abolition of small schools, and their consolidation into central schools, however ideally perfect from an educational standpoint, would rouse such an opposition from parents, managers, and teachers, that the whole movement would be set back indefinitely. It would be possible, however, to make a beginning by choosing carefully a few areas where, as an experiment, some of the elder children from certain schools within the area should be selected by managers and teachers, after consulting the parents, and sent every day to an easily accessible village or country town where first-rate teaching by specially trained teachers would be provided, and every opportunity that equipment, both inside and outside the School, could offer, practical as well as theoretical, to prepare the children in body and mind for the work before them while continuing their general education, and showing its use by applying it to this work of special preparation.

Parents would soon see the advantages offered, and, instead of opposing such a scheme, would become its warmest supporters, and, in many cases, might be ready to allow their children to remain longer at School. The teachers would be relieved to some extent of the most impossible and discouraging parts of their work, and more prizes would be offered to their profession in the higher salaries given to those specially trained for the centralised Schools.

Such an experiment could not be fairly tried without considerable cost at the outset, although the ultimate cost need not be great when it formed a component part of the whole educational system. This cost no local authority could rightly be asked to defray. It would be an experiment not local, but national, leading possibly to results of great importance in our national system of education. In some cases the cost of the experiment might be very much reduced by taking an existing school, say, in a rural district, with facility for acquiring land close by, and adding to it the necessary accommodation, together with demonstration plots and gardens.

Mr. Verney subsequently submitted the following particulars with regard to four areas in Bucks in illustration of his motion :—

Centre I.

Schools.	Accommodation.	Number on Roll.	Number over 11 Years old.	Number over 12 Years old.	Number of Miles from the Centre.
(a) - -	130	78	13	8	3
(b) - -	70	36	17	9	4
(c) - - -	110	118	34	23	1
(d) - - -	200	107	34	20	4
(e) - - - -	90	24	6	4	2½
(f) - - - -	74	40	9	5	1½
(g) - - - -	36	19	5	3	2½
(h) - - - -	143	129	45	23	2½
(i) - - - -	30	22	3	1	1

Centre II.

Schools.	Accommodation.	Number on Roll.	Number over 11 Years old.	Number over 12 Years old.	Number of Miles from the Centre.
(a) -	50	35	10	5	4
(b) - - -	100	51	13	10	6
(c) - - -	100	58	17	12	6
(d) - - -	122	101	29	17	4
(e) -	90	49	20	15	3
(f) -	40	15	9	6	4
(g) - - -	24	21	3	2	3
(h) - - -	136	99	25	18	2
(i) - - - -	1,122	978	251	156	1
(j) - - -	102	42	11	4	3
(k) - - -	60	37	7	4	1¼
(l) - - -	56	50	9	4	1½

Centre III.

Schools.	Accommodation.	Number on Roll.	Number over 11 Years old.	Number over 12 Years old.	Number of Miles from the Centre.
(a) - - -	106	62	20	16	5½
(b) - - -	103	83	22	15	4
(c) - - -	95	44	12	6	4
(d) - - -	131	78	17	10	3
(e) - - -	100	45	11	8	2
(f) - - -	129	95	29	19	5
(g) - - -	120	87	24	14	2½
(h) - - -	130	71	13	7	2
(i) - - -	90	49	20	15	3¾
(j) - - -	122	101	29	17	4
(k) - - -	100	58	17	12	4
(l) - - -	97	78	22	9	3
(m) - - -	94	40	13	11	½

Centre IV.

Schools.	Accommodation.	Number on Roll.	Number over 11 Years old.	Number over 12 Years old.	Number of Miles from the Centre.
(a) -	200	107	34	20	4¾
(b) -	90	24	6	4	5
(c) - -	110	118	34	23	4
(d) - -	52	37	9	6	5½
(e) - -	151	100	28	18	3½
(f) - -	90	54	15	7	3
(g) - -	60	51	10	5	3½
(h) - -	40	15	9	6	3
(i) - -	136	99	25	18	2
(j) - -	56	50	9	9	3½
(k) - -	24	21	3	2	2
(l) - -	70	36	17	9	2½
(m) - -	130	78	13	8	2

APPENDIX II.

CONSOLIDATED SCHOOLS IN THE UNITED STATES OF AMERICA.

1. The first indication of the consolidation of schools in America is to be found in a law passed in Massachusetts in April 1869, which reads as follows:—

“Any town in this Commonwealth may raise by taxation or otherwise and appropriate money to be expended by the School at their discretion in providing for the conveyance of pupils to and from the Public Schools.”

This transportation of pupils at the public expense resulted in the centralisation or consolidation of rural schools. Briefly this means the uniting of two or more small inefficient schools into one for the purpose of securing increased numbers, better attendance, and greater educational opportunities. Some action appears to have been taken almost immediately, as in 1869 the Secretary of the State Board quotes from a letter written by the Chairman of a School Committee in Massachusetts, as follows:—

“We have been consolidating and grading since the spring. Instead of 11 schools of the old six months’ grade, we have now five primary and two grammar, and shall be able to keep at least eight months this year with no addition to appropriation, though we pay better wages and transport the children in two districts at the expense of 10 dollars a week.”

2. The first general statement of the results of the law of 1869 was a pamphlet prepared by the Superintendent of Schools, in Concord, in 1893. Referring to the authorisation to expend money in this direction, he said—

“At first the authority was used mainly to convey pupils to the High Schools. Within a few years, however, many communities have used this authority to increase the educational advantages of the children, constantly decreasing in numbers, who live in districts at a distance from the Centre of population. This has been accomplished by closing many District Schools and transporting at public expense their pupils to the neighbouring Schools.”

In order to secure information regarding the movement, a Circular was sent to 165 towns, asking for the reasons that determined the towns to consolidate their Schools. The replies indicate that there were two distinct purposes, one financial and the other educational. In many towns the depopulation of the districts outside the villages had made it cheaper to transport to other Schools the few pupils living in the districts than to teach them inside. In other towns the desire to make strong Central Schools and to give all the children the benefit of better teachers, better appliances, and better supervision, were the dominant motives in determining consolidation.*

3. Education in the United States is a matter which is left to the governments of the separate States to arrange as they think proper, and by 1902 the practice of consolidating schools had been resorted to, either under specific provisions or under the general authority of the Law in the following States :—

California, Colorado, Connecticut, Florida, Georgia, Indiana, Iowa, Kansas, Maine, Massachusetts, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, Washington, and Wisconsin.

The Commissioner of Education in the United States wrote in his Report for 1902 as follows :—

“The possibilities of consolidation in the way of furnishing better and cheaper schools have been fully demonstrated, and such being the case, its general adoption would seem to be only a question of time.”

4. Though the movement for consolidation first arose about 40 years ago in Massachusetts, to meet the financial and educational difficulties due to a diminishing population, it appeared quite independently some 23 years ago in Eastern Ohio to meet the demand of an ambitious but sparsely settled population for educational opportunities similar to those of the Cities.†

The latter development is, however, on somewhat different lines. It is urged that the consolidated schools give an education like that in the cities, and the curriculum of the Ohio consolidated schools is, in fact, identical with that of the city Schools. The movement has, however, been widely taken up all over the United States and in Canada by educational reformers, who see in it a means of enlivening rural life and adapting the curriculum to rural needs.

There has been some indication that Agriculture should form a subject in consolidated rural schools. The subject was discussed at a meeting of the National Education Association in 1905, and one of the decisions arrived at was “that in a consolidated school having at least four teachers, one of whom is prepared to teach the elements of Agriculture and Manual Training, much more can be accomplished. The Committee therefore recommends that Agriculture be included in the programme, and that a room be provided in the Schoolhouse and plots of land set apart for illustrative or experimental work in Agriculture.”‡ This, however, goes somewhat beyond the plan adopted by Dr. Robertson, who is definitely opposed to the teaching of Agriculture as a special subject. In the Macdonald Schools such instruction is only looked on with favour as a new educational method.

5. The underlying reason for consolidation was undoubtedly the existence of a large number of Rural Schools with a very small attendance. A few instances may be given.

In Wisconsin in 1899 there were 955 Schools with an average daily attendance of not more than 10.§

* Report of the Commissioner of Education in the United States, 1894–5.

† Rural Schools and Teachers in North America. Board of Education's “Educational Pamphlets No. 13.”

‡ Report on Agricultural Education in the United States. Supplement to Board of Agriculture Journal, XIV., 1908.

§ Report of United States Commissioner of Education, 1899–1900.

In New York State in 1900 there were 3,552 School districts (*i.e.*, one-third of the total number) in which the average attendance was 10 or less.*

In Texas in 1907 there were over 600 Schools in which there was only one teacher. There were 533 Schools of less than 20 pupils on the books.†

In Iowa in 1901 there were 1,950 independent districts and 7,379 sub-districts which had schools with an average daily attendance of less than 20.‡

In Indiana there were, in 1900, 108 schools with 5 pupils or under, 487 schools with from 5 to 10 pupils, and 1,253 schools with from 10 to 15 pupils.§

In Michigan in 1902 there were 1,004 schools with less than 50 pupils.||

6. In a paper on the Consolidation of Rural Schools, read in 1903 to the National Educational Association of the United States, by the Superintendent of Public Instruction, in Lincoln, Nebraska, the following exhaustive arguments for and against consolidation are set out¶ :—

Arguments for Consolidation.

1. Ensures a much larger percentage of enumerated pupils enrolled.
2. Prevents tardiness among transported pupils.
3. Reduces irregular attendance.
4. Pupils can be better classified and graded.
5. No wet feet or clothing, nor colds resulting therefrom.
6. No quarrelling, improper language, or improper conduct on the way to and from school.
7. Pupils are under the care of responsible persons, from the time they leave home in the morning until they return at night.
8. Pupils can have the advantage of better schoolrooms—better heated, better ventilated, and better supplied with apparatus, &c.
9. Pupils have the advantage of that interest, enthusiasm, and confidence which large classes always bring.
10. Better teachers can be employed; hence better schools.
11. The plan ensures more thorough and more complete supervision.
12. It is more economical.
13. It permits a better grading of the schools and classification of pupils. Consolidation allows pupils to be placed where they can work to the best advantage, the various subjects of study to be widely selected and correlated, and more time to be given to recitations. Pupils work in graded schools, and both teachers and pupils are under systematic and closer supervision.
14. It affords an opportunity for thorough work in special branches, such as drawing, music, and nature study. It also allows an enrichment in other lines.
15. It opens the door to more weeks of schooling, and to schools of a higher grade. The people in villages almost invariably lengthen the school year and support a high school for advanced pupils.
16. It affords the broader companionship and culture that come from association.
17. It quickens public interest in the schools. Pride in the quality of work done secures a greater sympathy and better fellowship throughout the township. The whole community is drawn together.
18. Public barges used for children in the daytime may be used to transport their parents to public gatherings in the evenings, to lecture courses, &c.
19. Transportation makes possible the distribution of mail throughout the whole township daily.
20. By transportation the farm again, as of old, becomes the ideal place in which to bring up children, enabling them to secure the advantages of centres of population and spend their evenings and holiday time in contact with nature and plenty of work, instead of idly loafing about town.
21. The teacher's work is so well organised that the average recitation period is trebled.
22. One or two large families cannot "freeze out" the teacher.

* Report of Commissioner of Education for New York State, 1900.

† Bulletin of Council of Texas, 1907, No. 96.

‡ Biennial Report of Superintendent of Public Instruction, 1901.

§ Report of United States Commissioner of Education, 1900.

|| Report of United States Commissioner of Education, 1902.

¶ Proceedings of National Education Association at Boston, 1903.

23. The farmer and his family are more content with their self-sustaining occupation.
24. Ethical culture, free from the dissipations of social life, as manifested in cities.
25. Parents who are observant say that the cost of shoes worn out in walking to the separate schools, and the cost of medicine and doctor bills more than pay for the transportation.
26. Transportation makes it easier to maintain a quarantine in case of disease, and prevent the spread of contagion.
27. By centralisation there will be fewer and better teachers in our schools. It will be a case of the survival of the fittest. Better salaries will be paid those who do teach, thus enabling a person to make it possible to acquire a high school and normal training before attempting to teach.
28. By centralisation, all the children of the township have the same chance for higher educational advantages, which under the present plan only five or ten persons are able to get by leaving home and going to the city.
29. By centralisation we go a long way toward the solution of the problem "how to keep the boys on a farm." We bring to the farm that which he goes to the city and town to secure. Such a school may become the social and intellectual centre of the community. With a library room, music, debating club, &c., our boys and girls will hesitate to leave home and such a school for the uncertainties of city life.

Arguments against Consolidation.

1. Depreciation of property ; decreased valuation of farms in districts where schools are closed.
2. Dislike of sending young children to school far from home away from the oversight of parents ; and of providing a cold lunch for them rather than a warm dinner.
3. Danger to health and morals. Children obliged to travel too far in cold and stormy weather ; obliged to walk a portion of the way to meet the team, and then to ride in damp clothing, and with wet feet ; unsuitable conveyance and uncertain drivers ; association with so many children of all classes and conditions ; lack of proper oversight during the noon hour ;
4. Insufficient and unsuitable clothing, expense to parents of properly clothing their children.
5. Difficulty of securing a proper conveyance on reasonable terms, or, if the parent is allowed compensation, of agreeing upon terms satisfactory to both parents and school officials.
6. Local jealousy ; an acknowledgment that some one section of the township has greater advantages and is outstripping any other locality.
7. Natural proneness of some people to object to the removal of any ancient landmark, or to any innovation, however worthy the measure, or however well received elsewhere.
8. Less freedom of the individual pupil to advance at a rate best suited to him.
9. Saloon at the centre.
10. Too long distances ; bad roads, blocked in winter for weeks.
11. Invasion of individual rights.
12. If fatal diseases are carried to or start in these schools, then almost all of the children of the township are exposed to them.

The arguments against consolidation have constantly been answered, and many instances are given in the reports of different States to prove that the apprehensions are without foundation, especially in the case of Nos. 1 and 12.

7. Where the population is so sparse, it is not surprising to find that the consolidation of schools may result in much less expenditure per head even when the cost of transporting children is included. A few instances may be given of this.

In Ohio and Illinois it was claimed that the expense of schooling children in scattered districts has been reduced to nearly one-half.*

In Indiana a comparison is given between the cost of seven one-roomed schools with one teacher each and one four-roomed Consolidated School with four teachers. The net saving was 57 dollars in seven months, in spite of the fact that the teachers were paid slightly higher, and the cost of transportation was almost equal to the cost of teaching.

* Report of State Commissioner of Common Schools, Ohio, 1896.

In Massachusetts, in 1897, it was reported by a member of the School Committee of Montague that, for ten years, consolidation of schools had saved the town at least 600 dollars a year. In 1897 it was reported that in 68 per cent. of the Consolidated Schools the cost was less, in 16 per cent. that it was the same, and in 16 per cent. only that it was greater.

Some more detailed figures of cost are given in Appendix E. of the Board of Education's Educational Pamphlet No. 13. From these it is clear that, though consolidation is cheaper in many cases, in Eastern Ohio it is more expensive. This is largely due to the increase in attendance and to the increase of teachers' salaries, which have risen from 5*l.* 4*s.* per month before consolidation to an average of 7*l.* 10*s.* after consolidation.

8. The transportation of the children has resulted in considerable elaboration of system since the early days. School routes have to be carefully drawn up by Education Committees, regulations for drivers must be framed, special wagons have been devised. One of the chief questions which had to be solved was the maximum distance which children ought to be taken to school. A convenient indication is furnished as the result of an attempt made in 1900 by the Superintendent of Public Instruction in Indiana to obtain some figures as to the distance which pupils were transported in the various counties of Indiana. Over 50 replies were received, which indicate that the usual distance was about two, and very rarely more than four, miles.

APPENDIX III.

CONSOLIDATED SCHOOLS IN CANADA AND AUSTRALIA.

Canada.

The movement towards consolidating Schools in Canada was introduced as an educational experiment forming part of the scheme of educational reform devised by Dr. Robertson and Sir William Macdonald. The end which they had in view was mainly that of changing the curriculum of the Rural Schools in order to give prominence to the method of teaching rural children through rural conditions and the educational use of Manual Instruction. Sir William Macdonald made an offer in 1902 to set up in Canada five Consolidated Schools, which should be partly maintained by him, provided that Dr. Robertson should be allowed a free hand in appointing the Staff and organising the Curriculum. The time-tables of two of the Macdonald Consolidated Schools are given in an Appendix to the Board of Education's Educational Pamphlet No. 13, and it is clear from them that Nature Study, Gardening, and Manual Instruction form the central idea of the School; and it was part of the original plan that all the other subjects should be related to each other through these.

The consolidation of Schools in Canada is, therefore, an extension of the general principle of consolidation with a view to the special educational needs of country life. It is not claimed that in this case the consolidation is more economical, as economy does not form a necessary part of the idea with which it is undertaken. Indeed, it is clear from Dr. Robertson's evidence to a Committee of the Rural Education Conference that the Consolidated Schools have cost more than the old system of separate small district Schools.* The reason given for this increase of cost was mainly the conveyance of the children, and on this point Dr. Robertson said that the circumstances in Canada were not comparable to those in America.

It is claimed, however, that consolidation is spreading as a result of the examples provided. There are instances in Nova Scotia, New Brunswick, Ontario, and Quebec.† It is not clear, however, whether in these districts the example of the Macdonald Schools has been fully followed in the direction of altering the curriculum.

There is some evidence to show that the smallness of rural schools in Quebec is comparable to that in the United States, as in 1902 there were more than 60 per cent.

* Report of Rural Education Conference on a suggested type of Agricultural School, Appendix IV. (*d*) (Cd. 5774).

† House of Commons paper 212.

of the Protestant schools in that province which had an average attendance of 15 or less *.

Australia.

The chief reason which led to the consolidation of schools in Australia is the same as that which obtained in the United States, *i.e.*, the sparseness of the population.

For instance, in New South Wales there were, in 1909, 1,367 Schools (out of a total number of 2,136 Schools) with an average attendance of less than 20.†

Information as to the extent to which consolidation had been adopted as a remedy is meagre, but it is stated that in Victoria, up to 1899, 265 Schools were closed at a very considerable saving.‡

APPENDIX IV.

CONSOLIDATED SCHOOLS IN SCOTLAND.§

The position as regards the organisation of Rural Education in Scotland is as follows:—

1. The conditions which in the United States of America have led to a very extensive consolidation of schools *as a whole* do not obtain in Scotland. There are only 190 “side schools” which do not fulfil the ordinary conditions of a public school as regards staff, &c., and as regards these the Scotch Education Department are constantly urging that advantage should be taken of the provisions of section 3 (3) of the Act of 1908, which enables the Board to provide for the conveyance of the children to a central school, or even to pay the cost of lodging the children in convenient proximity to the centre school.

2. When, however, as many as twenty to thirty children can be gathered together at one centre it has been found impracticable to urge further consolidation. Local feeling is too strong, and the difficulties attaching to transference are magnified in every possible way. In such schools, therefore, the policy of the Department has been to strengthen the staff so as to enable the principal teacher to give special attention to the older children. This is done by means of the additional grant for staff in small schools which affects 1,000 schools in Scotland, and has the result that in a comparatively few cases only are schools containing from even twenty to forty children taught by one teacher only.

3. The schools, being thus staffed, are expected to provide for the full curriculum of the primary school, including a “Supplementary Course.” The nature of the Supplementary Course suggested for rural schools is given in the following extract from Schedule VI. of the Code:—

“ III.—*Course for Rural Schools.*

“(1) *Nature Study.*—Continued so as to secure on the part of the pupils familiarity with—

- “(a) The rocks, soils, and plants of the district;
- “(b) The life histories of weeds and insect pests, with the remedies against them;
- “(c) Wind and insect pollination of plants;
- “(d) Relations of air, water, and soil to vegetable and animal life.

“NOTE.—Instruction in the above subjects must throughout be of a *practical* character. To this end, School Gardens should be formed and made use of; observations on bees and bee-keeping should be made where possible; and advantage should be taken of any Agricultural Experiment Stations in the neighbourhood.

* Adams, Protestant School System of Quebec.

† Report of Director of Education for New South Wales, 1909.

‡ Board of Education Special Reports, Vol. 5.

§ This Appendix was prepared by the Scotch Education Department at the request of Mr. Acland and Lord Reay.

“(2) *Geometry*.—As in the Industrial Course, but more especially in its applications to Land Measuring and Surveying.

“(3) *Study of Newspaper Market Reports*.—With exercises and calculations based upon them.

“(4) *The Keeping of Accounts*.

“(5) *Optional*.—*Woodwork* (or *Ironwork*) as above.”

No Rural Supplementary Course is regarded as satisfactory which does not make some provision for practical instruction. Special grants are given for Practical Gardening and for Woodwork, as well as for Dairying and practical Household Economy, and the number of rural schools in which these subjects are taken by the older pupils is rapidly extending. It may be observed in passing that the instruction in Gardening in these schools is placed under the charge of the Agricultural College of the district who appoint officers to confer with the Boards and teachers as to the best methods of procedure and who exercise a certain amount of supervision over the work done.

For these Supplementary Courses there are available in a great many cases the teachers of special subjects engaged by the local Secondary Education Committees for the purpose of supplementing the regular staffs of the schools, where required, throughout the county. The tendency to make use of the services of such teachers is increasing.

4. As regards the Supplementary Course, it is undoubtedly better that this instruction should be given at a centre where a special staff can be provided rather than separately at four or five smaller schools, and the Department have constantly urged the advisability of having in every parish one well-equipped Supplementary Course School giving a two years' and—where possible—a three years' progressive course to which the older pupils from the surrounding schools should be transferred. This view is making way in certain districts, but progress is slow, partly because of the inherent difficulties of transporting the children, but also because of the strength of the local feeling already referred to.

5. Lastly, there are in every county certain Intermediate and Secondary Schools giving, in some cases, a three or four years' course and in others a five or six years' course beyond the “Qualifying Stage,” which stage is reached, on the average, between the ages of 12 and 13. The teachers of the Primary Schools in the surrounding districts are encouraged to pick out and prepare their more promising pupils for admission to these schools, where they will receive a more or less prolonged course of secondary education under favourable conditions. Under the Act of 1908 special arrangements are made for the upkeep of these central schools, and the Secondary Education Committee of each county has entrusted to it funds from which they may make maintenance allowances for travelling, for payment of fees, and for residence at the centre to any duly qualified pupils who may be in need of such assistance. That there is a very intimate connection between these central schools and the primary schools of the surrounding districts is indicated by the fact that, of pupils entering this year the secondary departments of schools for the first time, 6,904 came from other schools, as against 6,823 from the junior department of the central school itself. There are also arrangements by which pupils from primary schools in outlying districts who have been sufficiently instructed in secondary subjects at their original schools may be admitted direct to the second or even the third year of the central school course.

Generally speaking, these central schools are situated at the centres of population of the district, these places being, however, in many cases, small rural market centres. Most of the schools were formerly Burgh or Endowed Schools and their curriculum tends to follow traditional lines. There are centres, however, in rural districts such as Duns in Berwickshire, Castle Douglas in Kirkcudbrightshire, Huntly in Aberdeenshire, and many others in which a disposition is now being shown to take account of the circumstances of rural life and to modify their curriculum accordingly. Needless to say, this is a movement which is very favourably regarded by and encouraged by the Department. But it would be unwise in the present state of public opinion in Scotland, even in rural districts, to take any steps to establish distinctively rural courses of secondary education which would have the semblance of compulsion.

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

FIFTH REPORT

OF THE

RURAL EDUCATION CONFERENCE.

COURSES IN AGRICULTURAL COLLEGES.

Presented to Parliament by Command of His Majesty.



LONDON:

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This Report was prepared by the Rural Education Conference, which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June, 1910 (H.C. 63, 1910).

The following is a list of the earlier Reports of the Conference, copies of which may be purchased either directly or through any Bookseller, from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C.:—

No. 1.—County Staffs of Instructors in Agricultural Subjects, 1910, price 1d., with postage 1½d.

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No. 4.—Consolidation of Rural Elementary Schools [Cd. 6055], 1912, price 2d., with postage 2½d.

RURAL EDUCATION CONFERENCE.

Fifth Report.

1. The following reference received from the Board of Agriculture and Fisheries has been considered by the Conference :—

To consider and advise as to the considerations which should be borne in mind in the framing of courses occupying not less than two sessions at institutions devoted to the higher study of agriculture, and to report on the main characteristics which such courses should possess in order to render them suitable to those students who intend to take up practical farming or the management of landed estates.

2. The Committee which considered the reference held three meetings and examined the witnesses and received written statements from the gentlemen whose names are set out in Appendix I. to this Report. They also circulated to each Member of the Conference, to each Chamber of Agriculture, and to each Farmers' Union a series of questions arising out of the reference. A summary of the replies received to this circular, together with a statement received from the Honorary Secretary of the Agricultural Education Association summarising the replies received from members of that Association to the same series of questions, is printed as Appendix IV.

3. The reference is confined to what may be generally described as "long courses," such as are now given at agricultural colleges and university departments of agriculture, and does not include the shorter courses which only occupy one winter session or less. The reference further relates to two different classes of students :—

(1) Those who intend to become practical farmers.

(2) Those who intend to manage estates, either as landowners or land agents.

It is desirable, for the sake of clearness, to keep the consideration of the requirements of these two classes of students as far as possible distinct from each other, although the courses of study for the two classes include many of the same subjects. The reference does not relate to those students who intend to become agricultural teachers or experts of a special character.

4. At the present time courses of the nature described in the reference are provided at 16 institutions in England and Wales, a list of which is given in Appendix V. We have not considered it necessary to obtain evidence directly from each of these institutions as full information on the subject is to be found in the Report and Minutes of Evidence published by Lord Reay's Committee in 1908,* and later particulars are given in the Board of Agriculture's Annual Reports on the Distribution of Grants for Agricultural Education and Research. As far as we could ascertain, however, there were no statistics available as to the number of students actually attending courses such as we were considering, nor as to the parentage or intended occupation of such students. We, therefore, invited each of the institutions, with the exception of the Universities of Oxford and Manchester, at which such courses have only recently been organised, to furnish the Committee with this information and similar statistics for the past three years. Replies have been received from all the remaining institutions, with the exception of the University of Cambridge, and these are tabulated in Appendix VI. In the case, however, of University College, Reading, statistics with regard to the students in attendance only were available. The Agricultural Department of the University of Cambridge were unable to furnish us with the required figures, but it would appear from Professor Wood's evidence† that the agricultural courses at that University are at present attended by about 100 students, nearly one-half of whom intend to become agricultural teachers or experts, and the remainder are, for the most part, sons of landowners.

5. From the statements printed in Appendix VI. it will be seen that the total number of students attending during the first term of the session 1911-12 courses

* Departmental Committee on Agricultural Education in England and Wales. Report [Cd. 4206] ; Minutes of Evidence [Cd. 4207]. London : Wyman and Sons, 1908, 9d. and 5s. 3d. respectively.

† Appendix II (g).

lasting for two or more years at the 13 institutions named was 539; of these 128 were sons of farmers and 102 sons of landowners; 348 of these students intend to become farmers, and 98 to manage estates. Similarly, with the 495 students who have left 12 institutions during the three years 1908-11, 142 were sons of farmers, and 86 sons of landowners; 293 of these students are farming and 80 are managing estates.*

6. The work of the following institutions, which are in receipt of grants from the Board of Agriculture and Fisheries, did not appear to come within the scope of our enquiry, as they do not provide courses of the type described in the reference: British Dairy Institute, Reading; Horticultural College, Swanley; National Fruit and Cider Institute, Long Ashton, Bristol; Royal Horticultural Society's School, Wisley, Surrey; and the Royal Veterinary College.

COURSES FOR INTENDING FARMERS.

7. We may now proceed to consider the requirements of the first class of student above-mentioned, viz., those who intend to become practical farmers. At the present time all agricultural colleges and departments make some provision for this class of student, but the proportion of prospective farmers to the total number of students varies considerably at different institutions. In the same way the amount of fees charged, the requirements as regards the previous education of students and their knowledge of practical agriculture, the number of subjects taught and the degree of knowledge of each demanded from the pupils, differs widely at different institutions. In addition, at certain institutions, as will be seen from Appendix VI., the large majority of students attend for short courses only, while other institutions are mainly, if not entirely, concerned with students who take at least two years' instruction.

It will be convenient to consider the various questions which arise under separate heads.

Age, Previous Education, and Practical Experience of Students.

8. The Conference are of opinion that it is desirable that all students attending the long courses included in our reference should have received a good secondary education and have had at least one year's practical experience and residence on a farm. Sons of small farmers do not, in many cases, attend a secondary school, but these would not usually be in a position to attend an agricultural college for two whole years, and it is largely for this type of student that it is proposed to establish Farm Institutes. Sons of farmers able to attend the courses we are considering would usually have had sufficient experience of farming to enable them to take full advantage of a two-years' course at an agricultural college immediately after leaving a secondary school, and in their case the minimum age at which they might commence the course would be 16 years. In the case of town lads and others having no practical knowledge of farming it would be desirable that they should devote at least 12 consecutive months to farm work before commencing their course. In view of the difficulties experienced by students who are not farmers' sons in obtaining the necessary practical experience, it is desirable that the heads of colleges should prepare a list of farmers in their neighbourhood who are willing to offer farm pupils the practical training required, and it might be advisable for agricultural colleges with their own farms situated in their immediate neighbourhood to provide a 12 months' practical farm course which such students could take before commencing the ordinary two years' course. The college farms, which have an area varying from 100 to 460 acres, would, in most cases, afford suitable facilities for such a course.

9. The number of students attending the longer course at agricultural institutions appears to be increasing, and we think that the time has come when the Governing Bodies of these institutions should require intending students to produce evidence of having received a good general education at a recognised secondary school or to pass a simple qualifying examination in such subjects as English, Arithmetic, and Mensuration. At present, students proposing to study for an agricultural degree are required to pass the university matriculation examination, and this must always be so, but colleges do not appear to insist on an entrance examination for students studying for a diploma or a certificate. Students, however, who receive county or other scholarships have usually to pass an examination or

* It may be explained that some institutions replied that particulars as to parentage and occupations of a proportion of their students could not be ascertained and it is, therefore, possible that the above figures might be somewhat increased if more information were available.

other test to show their ability to take advantage of the course. We think that in future all prospective students should be required to provide evidence of some acquaintance with practical agriculture.

Subjects of Instruction.

10. The aim of courses for intending farmers should be the provision of a thorough grounding in the principles of practical agriculture, and in the sciences on which it rests, in so far as their laws in relation to agriculture have been ascertained and established. Even if progress were limited to securing that the practice of the best farmers of the country became universal, the economic benefits would be very great. We are of opinion that this fact has not always been sufficiently recognised in the past and we urge that teachers of agriculture should devote more attention to the study of the methods of skilled agriculturists.

11. The principal sciences in which instruction should be provided in the courses under consideration are Chemistry, Elementary Physics, with special reference to Mechanics, Botany, and Animal Physiology. It is obvious, however, that only an elementary knowledge of these sciences can be given in an agricultural course lasting two, or even three, years. Much difference of opinion exists as to whether "pure," as distinguished from applied, science should be taught to agricultural students. We are of opinion that wherever possible the elementary instruction in pure science which must precede more advanced instruction in applied science should be given by an agricultural scientist and should be given an agricultural bias. Difference of opinion also exists among experts as to whether the curriculum for the first year should be devoted to science subjects or to agriculture or both. It is clear that much must depend on the previous knowledge of the students; students who have, before commencing their course, acquired a fair knowledge of practical farming might be expected to derive much advantage from a first year's course devoted wholly to science subjects, but students less well-equipped with practical knowledge would probably be unable to see what bearing the teaching had on agriculture and their interest would not be secured. If, however, the recommendation which we have made in paragraphs 8 and 9 with regard to the admission of students only after they had acquired adequate practical knowledge was generally adopted the class of students attending agricultural institutions would become more uniform in this respect. Under these circumstances it might be advisable to devote the first year mainly to the study of science, the teaching of which should be illustrated as far as possible by agricultural objects, and should include instruction in the properties of soils, the nutrition of plants, and the elements of manuring. We also think that at least one day, or two half-days, a week should be allocated to such non-scientific subjects as surveying and practical instruction on the farm.

12. As regards the course taken as a whole it must always be remembered that the aim of the instruction in Agricultural Chemistry and Agricultural Botany should be, for the purposes of the class of pupil under consideration, to impart knowledge which will be of value to the student as a farmer and not to train agricultural chemists and agricultural botanists. For instance, in agricultural chemistry, too much time should not be devoted to the technical methods of analysis used by professional agricultural chemists. The study of this subject should rather be limited to the acquisition of such a knowledge (both theoretical and practical) of the more elementary chemical facts upon which the life of animals and plants and the character of soils depend, as would enable the student to interpret the practical bearing of a detailed chemical analysis, *e.g.*, of feeding stuffs and manures.

13. We think that in the past an attempt has been made to teach too many subjects with the result that the instruction in certain important subjects, especially agriculture itself, has suffered. Geology, Entomology, and Mechanical Engineering are subjects the comprehensive study of which we suggest, may, at any rate for the present, be left to pupils who will qualify as experts, to whom farmers would look when requiring special advice or assistance. Animal Physiology and Hygiene, on the other hand, are subjects to which too little attention has been devoted in view of the importance of the live stock industry in this country.

14. We, therefore, suggest for the consideration of the Governing Bodies of agricultural institutions that the efforts of the staffs should be concentrated on the thorough teaching of Agriculture, including Manual Instruction and the use and repair of machinery, Chemistry, Botany, Animal Physiology, Elementary Surveying, and simple Farm Book-keeping, and that farmer-students should not be compelled to attend classes in the following subjects, which, while of much interest and value to

farmers, cannot, with the subjects above-mentioned, be adequately taught in a two years' course:—Geology, Entomology, Engineering, Architectural Drawing, &c. We recommend, however, that students should be given the opportunity of attending classes in one or more of these subjects, if they wish to do so. In view of the growing importance of rural economics and the material advantages to be gained from co-operative production, distribution, and supply in connection with agriculture, it is highly desirable that these subjects should form part of a course of agricultural instruction for intending farmers.

15. The extent to which this class of student should engage in practical farm work while at college has received our consideration. We are of opinion that students should be encouraged to make themselves proficient in all the practical processes of farm work, and should be given a constant opportunity of observing the application on the college farm and on other farms in the neighbourhood of the principles learnt in the class room; but we do not think that they should devote much of the time intended for college study to practical husbandry; the vacations and occasional afternoons during the terms would provide sufficient opportunity for this.

16. We have not considered it desirable to lay down any more specific directions for uniform instruction to be given to all students. A properly qualified head of an agricultural college will usually be able to adapt the curriculum to the individual requirements and capacities of the students under his charge.

Length of Course.

17. The minimum length of courses of the type we are considering should be two winter sessions with one summer term (five terms in all) or three winter sessions. For farmer-students who are able to attend a continuous course, the normal length, in our opinion, should be two years (six terms); but students who have received a sufficiently good general education to enable them to pass a matriculation examination should be encouraged, if they can afford the time and money, to take a three years' course and work for a Degree in Agriculture. Other students should be encouraged to obtain a College Diploma or Certificate, which, in every case, should connote knowledge of practical farm work.

COURSES FOR STUDENTS INTENDING TO MANAGE ESTATES.

18. It may be assumed that a student who intends to manage estates, either as a landowner or as a land agent, requires a better education than the student classified under the first head, and also that he is usually prepared to spend three years at a college instead of two.

19. The minimum age at which this class of student should commence their course is 16 years, but preferably these students should not attend college until they are 17 or 18. With these students, as with those dealt with above, it is most desirable that they should have had at least one year's experience of practical farming before attending college in order to take full advantage of the course. The standard of general education should be higher in the case of these students and the entrance examination should be equivalent to the Oxford or Cambridge Senior Local. A student who was able to produce a higher certificate or degree (including pure science) might be excused the first year's course.

20. There is probably no institution which devotes itself entirely, or even mainly, to this class of student, and in very few institutions is the agricultural course at present given exactly suited to his requirements. In our opinion the majority of students of this class should aim at obtaining an agricultural degree, and to this we refer later. For those, however, who do not propose to study for a degree the most convenient arrangement will obviously be to require them for the first two years to follow a similar course to that prescribed for farmers (but exacting a somewhat higher standard), and to devote the third year to specialisation in appropriate subjects, while continuing their scientific training and knowledge of agriculture in the field as well as in the class room. For the class of student now under consideration, instruction should be provided in the following subjects, in addition to those mentioned in paragraph 14 as required by the student who intends to farm:—Forestry, Agricultural Valuations, Rating and Taxation, Agricultural Law (including landlord and tenant), Estate Book-keeping, Building Construction, and, in some cases, Advanced Surveying and Levelling. It would not be necessary, however, for instruction in all these subjects to be postponed until the third year,

and we recommend that an opportunity should be given to students who intend to farm as well as to those who intend to manage estates to attend classes in some of the above subjects during the first two years.

DEGREE AND POST GRADUATE COURSES.

21. At six of the institutions with which we are concerned courses of study for the Degree of B.Sc. in Agriculture are provided. At the Universities of Oxford, Cambridge, and Leeds agriculture may be taken as one of the subjects in the final pass examination for the ordinary degree; in addition, at the first two of these Universities there are courses (for a Diploma in Agriculture) of a more advanced standard than those required for the degree, and these courses are usually taken by students who have already graduated.

22. The courses for a degree in agriculture vary at different universities, but usually the first year is devoted to pure science and the second and third years to agriculture and agricultural science. The principal difference between courses for Degrees and the Diploma and Certificate courses, which we have previously been considering, is the increased knowledge of pure science which is required for a degree. A student, however, who had received a good preliminary training in pure science at a secondary school would not, as a rule, find a degree more difficult to obtain than a diploma.

23. It would not be practicable to insist on students who intend to study for a degree obtaining a thorough knowledge of practical agriculture before commencing their course, as in the case of those students who have not been brought up on a farm this would necessitate a considerable break between the time they leave the secondary school and proceed to the university. It is, therefore, necessary that these students* should be given ample opportunity during their course of study of obtaining practical instruction on the university farm and other farms in the neighbourhood, and they should be encouraged, or even required, to spend their vacations on a farm.

24. While in Scotland the number of farmers' sons who obtain degrees is considerable, in England the number is small, and of these the majority probably do not intend to return to farming. It may be anticipated, however, that with the increased attention now being given to agricultural education and the improvement in education generally the number of practical farmers possessing agricultural degrees will steadily increase. With regard to the second class of student dealt with in this Report, we think that every inducement should be given to future land-owners and land agents to obtain an agricultural degree if they are able to devote three years to study at a university institution.

SCHOLARSHIPS.

25. The facilities for obtaining scholarships for courses such as we are considering vary greatly in different counties. In a few counties no agricultural scholarships are offered by the County Council; in others, three or four, tenable for two or more years at an agricultural college or university agricultural department, are awarded annually; while in Yorkshire, and even more so in Lancashire, the opportunities for suitable students to obtain free instruction at such courses together with a maintenance allowance appear to be much greater. We recommend that every County Council should award Senior Agricultural Scholarships, the examination for which should not be limited to literary, but should include some science subjects. Such scholarships might, in our opinion, be awarded to students of not less than 16 years of age on leaving the secondary school and tenable at an agricultural college as soon as the holder can satisfy the Principal as to his knowledge of practical farming.

26. There is also a great need for a larger number of "open" scholarships, such as those awarded by the Surveyors' Institution, and we recommend agricultural and similar societies as well as private individuals to consider the advantage of offering such scholarships. Local education authorities might also consider the desirability of not limiting all their scholarships to the particular institution which they support.

SPECIALISATION OF INSTITUTIONS.

27. We have referred above to the fact that there is no institution which devotes itself to students who intend to manage estates, and we are of opinion that,

* It must be remembered that, as explained in paragraph 3, this Report does not relate to future teachers or special experts, who would require longer practical experience.

while probably it is not possible at present to confine any college entirely to this particular type of student, an effort should be made, in the future, to secure that a limited number of institutions, more particularly those connected with a university, should provide courses especially suitable for the second class of student dealt with in this Report.

28. The circumstances of the different institutions differ so widely that it is not possible to recommend that there should be uniformity in the amount of the fees charged, but we are of opinion that wide differences in this respect should not be encouraged, except in so far as a more scientific course involves additional expense.

29. We are of opinion that every institution should aim at providing a complete course for one of the two classes of students with which we have dealt; but, in addition, we recommend that special attention should be given to the particular branch of agriculture (*e.g.*, dairying, horticulture, forestry) chiefly practised in the district. This recommendation would appear to be in accordance with the recent policy of the Board of Agriculture and the Development Commissioners in regard to institutions specialising in one group of subjects for the purposes of research.

30. A number of the students trained in the institutions in England and Wales take up farming in the Dominions and foreign countries. In view of the facilities existing in these countries for agricultural education and of their varying agricultural conditions, we do not suggest that any of the institutions in this country should specialise in colonial or foreign agriculture.

STAFF.

31. We have considered how far it is necessary for the teachers on the staff of institutions included in our reference to have received a training in practical agriculture. It is, no doubt, extremely desirable that all the members of an agricultural staff should have had some experience of farming and that they should be able to apply their instruction practically. This, we think, is not essential, however, in the case of teachers of certain subjects, for example, Chemistry, Botany, and Manual Instruction, nor so important as a thorough knowledge of the subject taught and skill in teaching.

HENRY HOBHOUSE.

(Chairman.)

27th February, 1912.

LIST OF APPENDICES.

- Appendix I. List of Witnesses, &c.
 Appendix II. Summaries of Evidence.
 Appendix III. Written Statements received by the Committee.
 Appendix IV. Summary of Replies to a Schedule of Questions circulated by the Conference.
 Appendix V. List of Agricultural Colleges and Departments in England and Wales.
 Appendix VI. Number, Percentage, and Occupations of Students.

APPENDIX I.

LIST OF WITNESSES, &c.

1. The Committee have examined the following witnesses:—
 Professor R. S. Seton, B.Sc., Professor of Agriculture, Leeds University;
 Mr. R. Hart-Synnot, D.S.O., B.Sc., Director of the Department of Agriculture and Horticulture, University College, Reading;
 Professor J. R. Ainsworth Davis, M.A., Principal of the Royal Agricultural College, Cirencester;
 Professor D. A. Gilchrist, M.Sc., Professor of Agriculture and Rural Economy, Armstrong College, Newcastle-upon-Tyne;
 Mr. M. J. R. Dunstan, M.A., Principal of the South-Eastern Agricultural College, Wye;
 Mr. John Evens, Farmer, Burton, near Lincoln; Member of the Lindsey County Council; and
 Professor T. B. Wood, M.A., Drapers' Professor of Agriculture, Cambridge University.
2. Written communications have also been received from:—
 Professor C. Bryner Jones, M.Sc., Professor of Agriculture, University College of Wales, Aberystwyth;
 Mr. P. Hedworth Foulkes, B.Sc., Principal of Harper-Adams Agricultural College, Newport, Salop; and
 Mr. W. J. Grant, Director of Agricultural Education, Monmouthshire County Council.

APPENDIX II.

SUMMARIES OF EVIDENCE.

(a) Professor Seton.

The witness said that two distinct courses were provided in the University of Leeds that might be regarded as fulfilling the conditions of the reference. One of these courses certainly did fall within the terms of the reference. It was a little doubtful, however, whether the other course did as it depended on the meaning of the term "session." The Chairman, however, asked the witness to give the Committee information regarding both courses.

The witness then explained that previous to 1899 the Agricultural Department of the then Yorkshire College provided two courses, one a full college course, which nominally extended over two academic years, and the other a short course of ten weeks in the winter, designed to meet the requirements of farmers' sons and those who could not be spared from the farms for more than one term.

In 1899 the short course was abandoned, as it "was found inadequate to enable the students to obtain a satisfactory grounding in the scientific facts bearing on agriculture. During the first five of the ten weeks, progress was slow, indeed very little was learnt at the outset; towards the close of the ten weeks progress was comparatively rapid, and, unfortunately, the student came to the close of his course at a time when he was in a position to acquire more benefit from the lectures in one week than he did during the first four." (Annual Report of the Agricultural Department of the Yorkshire College and East and West Ridings Joint Agricultural Council, 1899.)

In 1899 the work of the Department was reorganised and the authorities concerned considered that any courses of instruction for farmers' sons should be as thorough as possible, regard being had to the time that it was likely young farmers could devote to a course. It was then decided that the shortest complete course should extend to two Winter Sessions, each of 20 weeks, and one Summer Term of 10 weeks—total, 50 weeks. This was to be regarded as a "General" Course for students who did not intend to study for a diploma. The subjects included in the course were the following:—

Winter Sessions.

Agriculture (including lectures and visits to the University Farm twice a week), Elementary Physics and Chemistry (including practical work in the laboratory), Natural History (Botany and Zoology, including practical work in the laboratories), tutorial classes (including Arithmetic and Mathematics with special reference to Agriculture), Veterinary Science (including occasional demonstrations at the University Farm), Mathematics, Book-keeping, Agricultural Botany (including practical work), and Agricultural Chemistry (including practical work).

Summer Term.

Lectures in Dairying and visits to the University Farm, Poultry-keeping, Forest Botany (including excursions to woods), Horticulture (including a few practical demonstrations in the garden at the University Farm), Chemistry (including practical work), and Surveying (including practical work in the field).

The above course has not been altered during the past 12 years. The course permits of farmers' sons and others attending during the winter months, when it is said that they can best be spared from the farm, but to make the course complete necessitated the work of one Summer Term being added, and most students avail themselves of the opportunity of attending during the Summer Term.

In reply to questions Professor Seton explained what was meant by "tutorial classes" included in the first winter course. He said that part of the time of a special tutor (a permanent member of the staff) was devoted to revising such subjects as Arithmetic, Mathematics, Mensuration, &c. Such instruction was found to be necessary, as most of the students, having spent some years on a farm after leaving school, had lost touch with the subjects mentioned. With very few exceptions, all the students, including those who have attended secondary schools, are required to take the tutorial classes, and are found to derive great benefit by the instruction given by this tutor. The whole of his work was given what might be termed a distinct agricultural "bias."

For those who desire to study for the National Diploma in Agriculture, a course of instruction for an additional Winter Session, extending to 20 weeks, was provided, and this course also has been maintained during the past 12 years.

The following tables supply particulars of the time allotted to each subject in the respective courses:—

First Year.

	Approximate No. of hours.					
Agriculture (Lectures)	...	...	...	...	...	60
Agriculture (Out-door demonstrations at University Farm)	...	...	...	...	...	120
Elementary Science (Chemistry and Physics)	...	...	...	...	...	60
Chemical Laboratory	...	...	...	...	...	180
Natural History	...	...	...	...	...	100
Tutorial	...	...	...	...	...	60

Summer Course.

Dairying	...	...	...	...	...	30
Horticulture	...	...	...	...	...	10
Poultry-keeping	...	...	...	...	...	20
Forest Botany...	...	...	...	...	...	40
Mathematics	...	...	...	...	...	20
Surveying, including field work	...	...	...	...	...	120
Practical Chemistry	...	...	...	...	...	60
Excursions to University Farm and Forest Botany excursion to woods	...	...	...	...	...	30

Second Year (for students taking General Course).

	Approximate No. of hours.
Agriculture (Lectures)	100
Agriculture (Out-door demonstrations, including Veterinary demonstrations and demonstrations on Farm Machinery at University Farm)	120
Agricultural Chemistry (Lectures)	60
„ „ (Laboratory)	120
Botany	80
Veterinary Science (Lectures)	40
Book-keeping	40
Mensuration	20

Second Year (for students taking 3 years' course.)

Pure Chemistry, Lectures	60
„ „ Laboratory	140
Agricultural Geology, including Laboratory	100
Agricultural Botany	100
Agricultural Zoology	30
Agricultural Surveying	40
Mensuration	20

Third Year.

Agriculture, Lectures	100
Agriculture (Out-door demonstrations, including Veterinary demonstrations and demonstrations on Farm Machinery at University Farm)	120
Veterinary Science	80
Agricultural Engineering	60
Agricultural Chemistry, Lectures	60
„ „ Laboratory	60
Book-keeping	40

Witness was asked for particulars as to the after-careers of students who had passed through his Department. He said that this question had engaged the attention of the Yorkshire Council for Agricultural Education, which is the governing body of the Agricultural Department of Leeds University, in 1907. Circulars were sent to all students who had attended the Department since the reorganisation in 1899. The number of students who had at that time been enrolled in the Department since 1899 was 227, but of these 46 had either not completed their course or had not yet decided upon their future business. Replies were received from 150 of the remaining 181, and of these it appeared that they were—

	Per cent.
(a) Engaged in farming	54
(b) Engaged in businesses having an agricultural connection	13·3
(c) Engaged in estate work, surveying, valuing, &c.	19·3
(d) Engaged in agricultural teaching	6·0
(e) Engaged in business having no agricultural connection	7·3

Of the 181 students above mentioned 100 were Yorkshire students in receipt of scholarships. Replies received from 86 of these, when arranged as above, showed:—(a) 66·3 per cent.; (b) 14·0 per cent.; (c) 11·6 per cent.; (d) 1·1 per cent.; (e) 7·0 per cent.

Professor Seton explained as regards these scholarship holders that the Yorkshire Council would not award exhibitions to lads who had not some practical experience of farming. Applicants for scholarships had first to pass a qualifying examination and then appear before a Committee, and if it was found that a candidate had no knowledge of farming, he would be told to come up again in twelve months, having spent the interval on an approved farm. In framing their courses of instruction, the Council assumed a knowledge of practical agriculture.

Witness gave some particulars of the students who attended the various courses provided by the Department in the Winter Session, 1910-11. The total number was 41; of these 18 were taking the General Course, first year; 4 the General Course, second year; 18 were studying for the National Diploma in Agriculture; and one was studying for the degree. It should be explained that no distinction is made between "General Course" students and "Diploma Course" students until after the first year. Of the 41 students above-mentioned, 16 paid fees, the remaining 25 being in receipt of scholarships and exhibitions. Of the 18 "Diploma" students 9 were farmers' sons; the other 9 were not farmers' sons, but they had all received practical training on farms with the intention of taking up farming or the management of land.

The fee for the winter course is 10*l.* and for the summer course 5*l.* The total cost of the General Course, including an allowance for board and lodging, would, therefore, amount to approximately 70*l.*, and the cost of the Diploma Course would amount to 100*l.*

Witness explained the syllabus for the Degree Course and emphasised the fact that during the two years' study for the final examination students are required to spend at least six months on the University Farm at Garforth, where each student must conduct an experiment on some agricultural subject and present a report upon it.

In answer to questions as to the difference in courses for students who intend to engage in practical farming and those who propose becoming estate agents, &c., Professor Seton said that no distinction was made at Leeds University. Students, however, who were going to sit for the examinations held by the Surveyors' Institution attended an extra course in law. He agreed, however, that in certain subjects, *e.g.*, building construction, draining and forestry, the courses needed strengthening to make them sufficient for future land agents.

The witness felt with reference to both the General and Diploma Courses that, if the exigencies of the time-table permitted, it would be advisable to allot considerably more time to the study of Natural History, which includes Botany and Zoology, and with reference to the General Course that the subject of Geology could be usefully included. He said it was difficult, however, to see in what way additional time could be provided for these objects. Having regard to the number of hours allotted to the respective subjects, it might appear that additional time could be given to the three above-mentioned subjects by some curtailment of the time allotted to Chemistry. During the past two sessions arrangements have been made whereby students have the opportunity of attending a class in Agricultural Economics, but it has not yet been deemed advisable, on account of the crowded state of the time-table to make attendance compulsory upon this class. Nevertheless the class has been attended by a considerable proportion of the students—especially the senior students. A fee of half-a-guinea was charged for this course.

It was felt in framing these courses that instruction in the Pure Sciences, included in the curriculum, is absolutely necessary if a clear conception of the applied side of the respective sciences is to be formed. Without a training in the Pure Sciences it was felt that instruction in the Applied Sciences must be of an empirical character.

As regards the subject of agriculture itself, the witness felt that there is considerable room for additional study in special branches, such as the markets of the world and their relationships to the home markets; the opening up of new countries, and the probable effect upon English agriculture both in respect of live stock and food products; an intelligent appreciation of foreign reports, especially with regard to crop prospects and their probable effect upon prices in the home markets; special study of the requirements of the home consumer due to altered conditions of life.

(b) Mr. Hart-Synnot.

The witness said that he was one of a deputation appointed by the Council of University College, Reading, which visited Canada and the United States of America last year for the purpose of inspecting universities and colleges engaged in agricultural education and research in those countries. The report* of this deputation dealt partly with the subject which was engaging the attention of the Committee, and he referred the Committee especially to pages 52 to 89 of the report.

* The Problem of Agricultural Education in America and in England with special reference to a policy of developing the work carried on at University College, Reading. (Published by the College, 1910, price 1*s.*)

The witness stated that in his opinion an Agricultural Department such as the one at Reading should expect to cater for four classes of students: First (and, he might say, essentially first), students who intend to become farmers; secondly, future landowners; thirdly, future land agents; and lastly, students who hoped to become agricultural teachers or experts. In his opinion the course for these students should last for four years. During the first year he thought that all students should be taught agricultural subjects and agricultural science. This was the reverse of what is usually done at present in England, pure science being taught during the first years and the student paying most attention to agriculture and agricultural science during the second part of his course. He would attempt no classifying of long-course students until the end of the first year, when it would be easy to advise students whether they should study for a degree, for a diploma, or for some external examination suited to their requirements. In a four-year course, he would propose to continue the study of agricultural subjects during the second year, and devote the third year mainly to pure science while continuing the study of strictly agricultural subjects. The fourth year's work would be specialised according to the student's future career as a farmer, an expert, or a land agent. If it were found impossible, however, to extend the course beyond three years it would probably be necessary to devote the second year to the study of pure science. The witness explained that they were gradually re-organising the courses at Reading on the lines he had indicated.

With regard to the students at present attending the Agricultural Department, Mr. Hart-Synnot regretted that he could not supply figures from memory, but he would be pleased to furnish particulars in reply to a circular which he understood the Committee were going to issue. The average age of students was about 18, no student being admitted under 16. Every encouragement was held out to the sons of farmers, as it was through the training of future farmers that the College saw most hope of rendering service to the neighbourhood. At the present time the entrance examination consisted in a simple test in English and arithmetic. A fair proportion of the students paid full fees, and some of those who came without scholarships were farmers' sons. Some of their best students were short course students who eventually decided to take a long course. In this respect he hoped Farm Institutes, if established, would act as "feeders."

The witness stated that they intended to give increased attention to the business side of the agricultural instruction, through the fuller study of book-keeping, marketing, business methods and co-operation. For degree students lectures in agricultural economics should be provided. At a College like this there is always a considerable difficulty in getting sufficiently into touch with farmers in the neighbourhood. He hoped that the work which they proposed to carry on by means of grants from the Development Fund would be of great assistance in this respect. There was no doubt, however, that the attitude of farmers towards the Agricultural Department of the College was becoming increasingly favourable. He hoped that they would shortly be able to provide courses for farmers themselves, extending over, say, a week and devoted to one definite subject, for example, wheat.

(c) Professor Ainsworth-Davis.

The witness said he had been the Principal of the Royal Agricultural College for the three years, and previous to that had spent many years as a Professor at the University College of Wales, Aberystwyth. He first described the course provided at Cirencester for students who intended to take up the management of landed estates, and said that it had also proved of value to students who, after leaving, had undertaken the management of small holdings. The full course extended over three years, *i.e.*, three sessions from October to July, each consisting of 3 terms (33 weeks). The course was intended for students who had received a good general education.

During the first year a sound foundation in Natural Science was given, agricultural and forestry illustrations being used whenever possible, the subjects under this head included Inorganic Chemistry, Physics (with stress laid on Mechanics), Geology, Botany, and Zoology. Preliminary Agriculture was also taught with Elementary Book-keeping and Farm Journal; practical work was done on the farm, and some time spent in the workshops, partly in the interests of manual training.

During the second and third years the following subjects, placed roughly in order of importance, were taught:—

Agriculture.—A complete outline of the Theory of Agriculture was given, culminating in the study of the possibilities of agricultural land in various localities and

under varied conditions. Farm routine was studied during the entire year, including chief variations in practice, and embracing dairy and poultry work. This included agricultural excursions to farms of repute, attendance at sales and shows, and so forth. Special attention was given to the judging and valuation of stock.

Agricultural Chemistry.—The aim of the instruction in this subject was to give a sufficient training in the theory and practice to enable a student to gain a clear comprehension of the analyses of soils, manures, and feeding stuffs.

Applied Botany.—This dealt with plants of economic value, including a detailed study of grasses. Instruction in fungoid and other pests was also given.

Applied Zoology.—This dealt with beneficial and injurious animals.

Estate Management.—This was divided into three parts as follows:—(1) General Management and Improvement of Landed Estates, including *inter alia* Imperial and Local Taxation: Valuation and use of Valuation Tables: Leases and Agreements: Drainage and Water Supply. (2) Estate-building and Repairs, including Building Construction, Specifications and Quantities, Sanitation and Drainage. This part of the work is supplemented by Surveying and a modicum of Civil Engineering. (3) Estate Law.

Forestry.—The College possessed exceptional opportunities for instruction in this subject. By the kind permission of Lord Bathurst the College was able to use his Lordship's well-managed woods of over 3,000 acres for instructional purposes. The course also included the study of other well-managed woods in this country, and vacation excursions to Continental forests were made.

Professor Ainsworth-Davis said that he, perhaps, need not say that the most important asset of a student who proposed to manage land, namely, tact, could not be imparted by any College course, although he hoped that the course would prove helpful in this direction. A student educated on the lines above suggested would, the witness said, in his opinion, be, at the completion of the course, at once useful as a sub-agent, and he felt that an agent should not require a premium to be paid in respect of such a student. Several students from Cirencester had gone direct into an estate agent's office, and he had received very favourable accounts of them.

The witness thought that if a place of higher instruction could have an estate for actual management, in the same way as some colleges now have farms, senior students could acquire a practical knowledge of routine office work, and that an extension of the training to a fourth year for this purpose would fit the best students to become agents without any further specialised education.

The witness explained that at Cirencester the curriculum is divided into two branches. The course he had described was the one for the "E," the Estate Management and Forestry Branch. The other branch, viz., the "F," the Farming and Colonial Branch, was intended for students who proposed farming on a large or fairly large scale. The majority of the subjects are common to both branches; the Farming Branch, however, did not include instruction in estate management or forestry, but veterinary surgery and bacteriology were taught.

The witness then gave some particulars as to the number and type of students attending the College. He said that the number at present in attendance was 82, of these 18 were attending courses of less than two academic years, and the remainder attending courses which fell within the terms of the Reference before the Committee. Of these 64 students, 39 were the sons of landowners and 8 others were sons of parents connected with agriculture. These students had expressed their intention with regard to future occupations as follows:—39 intended to farm, 23 were going in for estate management, and 2 for agricultural teaching. The witness also gave some particulars of the 118 students who had left the College during the three academic years 1908 to 1911, of these 56 had attended courses falling within the Reference. The reason why the proportion of the total students attending long courses was larger at the present time than during the previous years was partly owing to alterations which had been made in the College courses and partly to the fact that there was a general tendency for students to attend longer courses.

The age of the students varied considerably. The age of the 46 in-students varied from 17 to 21, and of the 36 out-students from 21 to 50, but among the latter those who were attending the three-years course were all under 30 years of age.

In reply to supplementary questions, witness said that not many tenant farmers could afford to send their sons to the College. The inclusive fee for in-students amounted to 47*l.* per term, and for out-students the fee for tuition only was 25*l.* per term, with an entrance fee of 5*l.* Sons of farmers would, therefore, usually

require the assistance of scholarships to enable them to attend the College. At the present time there was no entrance examination, but he thought it would be a good thing if one could be insisted upon. In many cases the previous education of students was not the most suitable that might be devised for the purpose.

Professor Ainsworth Davis explained that the College was associated with the University of Bristol for the purposes of the B.Sc. Degree in Agriculture and the B.Sc. in Forestry, and that students studying for these degrees took the first year's course (in pure science) at Bristol.

(d) **Professor Gilchrist.**

The witness explained that he graduated as B.Sc., in Agriculture at Edinburgh University in 1889. Previous to taking the course for this degree he had ten years' experience of farming on his father's farm in Lanarkshire. From 1889 to 1894 he was the first lecturer in Agriculture and the head of the Agricultural Department at University College, Bangor, which was the first collegiate centre under the Board of Agriculture. From 1894 to 1902 he was at Reading College and organised there a new centre for agricultural instruction.

Professor Gilchrist first described the courses at Armstrong College which fell within the terms of the Committee's Reference. He said that the course for the Degree of B.Sc. in Agriculture of the University of Durham extended over three years, and the students before entering on this course must have passed the Matriculation Examination of the University of Durham, or its equivalent. The following subjects were included in this course:—

1st year: Mathematics, Physics, Practical Physics, Chemistry, Practical Chemistry, Botany, and Zoology.

2nd year: Agriculture, Part I., Land Surveying, Agricultural Geology, Agricultural Botany, Agricultural Entomology, Anatomy and Physiology of Farm Animals, Organic and Agricultural Chemistry.

3rd year: Agriculture, Part II., Pathology and Farm Hygiene, Forestry, Estate Management, Agricultural Engineering, Farm Book-keeping, Chemistry applied to Agriculture, and Botany applied to Agriculture.

The witness explained that the course for the Armstrong College Diploma in Agriculture covered much the same ground as the course for the Degree above described, but that Physics was not included in the first winter, and that the work generally was not of such an advanced character. The course for the Diploma extends over three winters, and was intended for future farmers or practical agriculturists. At the same time many such, who have had a good secondary education, take the Degree Course. If a farmer's son could pass the matriculation examination he advised him to take the Degree Course. For the Diploma Course no preliminary examination was required.

There was a growing tendency for students to take the longer courses and the future in this respect was very hopeful. The number of individual students attending the above courses for the current and two previous sessions were as follows:—

—			1909-10.	1910-11.	1911.
Degree course	...	...	9	8	17
Diploma course	...	...	11	13	11

The great bulk of the students are farmers' sons, while some are intending to become land agents. The witness said that a fair number of the sons of city men had attended the agricultural classes at the College, but practically all of them had taken a course of practical training before coming to the College. In his opinion young agriculturists who have had practical experience of all farm operations make far the best students for such courses. Students not brought up on farms should, before taking a course, spend some time at practical farm work, or, in the case of students intending to become agents, in an estate agent's office. It is essential to the success of the course that there should be a majority of young men with good practical experience to give a thoroughly practical tone to the students, and that students who do not work satisfactorily, and who fail to respond to this practical atmosphere, should not be allowed to proceed. This element, when permitted, the witness said, did great harm.

Professor Gilchrist laid great stress on a training in pure science being given, either before entering on such a course, or as a first part of it. In his opinion, unless a student has a sound elementary knowledge of physical, chemical and biological facts, and of elementary mathematics, his ultimate technical training rests on an unsound basis.

In reply to questions on this subject witness said that he was aware that in certain American universities agricultural teaching was given in the first year and pure science taken later, and he had given careful consideration to the Reading report on this subject. But, in his opinion, if pure science was not taken in the first year a student would never leave the technical subjects to return to pure science. He admitted that he was very little in touch with the students during their first year, when they were attending classes by pure science teachers, but he was hopeful of being able to arrange to see more of them without injuring the pure science teaching. He thought that it was preferable that chemistry should be taught in the first year by a pure, rather than an agricultural, chemist. The same was true with regard to botany but not quite to the same extent. So greatly did he value this first years' course that he would advise a student who could devote only two years to agricultural education to take the first and second years' course rather than the second and third years', provided that the student had a knowledge of practical agriculture before entering the College.

Continuing, Professor Gilchrist said that successful farming depends to a large extent on a sound business knowledge. For this reason the teaching of Agriculture, of Estate management, and of Book-keeping is not only by far the most important, but each of these subjects should be taught so as to make students conversant with the values of crops and live stock, with market fluctuations and how they are influenced, and with the business details essential to successful farming. "The Farmers' Business Handbook," by I. P. Roberts, Director of Agriculture in Cornell University, deals well with this side of the farmer's training.

The witness said that a college farm, or an experimental farm, did not provide a practical training in farm management. Such a farm was necessary as a laboratory to the teacher in agriculture, and was essential to the success of his teaching, but the practical training must be received on commercial farms, and should not be of less than three years' duration. During the course of study at the College, students should be taken to markets and over well-managed farms. This will greatly enhance their practical training. He was greatly in favour of research being conducted at agricultural Colleges as it provided material for lectures, and kept the lecturer in touch with practical work.

It is of the greatest importance that students should be kept in touch with practical farming throughout their course. At Armstrong College, the Agricultural Students' Association, and the addresses by eminent practical men given to this Association, combined with regular visits of the students to well-managed farms, have been of the greatest value in this respect.

He explained that the course for the Diploma at his College extended over three winters and enabled the students to devote six months each summer to practical work. They are thus on the farm at the time when their work is most valuable, and when they receive the greatest practical benefit. Students who do not avail themselves fully of this time for farm work cannot pass the agricultural examinations held in connection with the Diploma, unless they have already had a good practical training. Students are advised to keep a diary during the time they spend on the farm.

Professor Gilchrist said that the composition fee for the Degree Course was 20*l.* each session or with capitation fees, &c., 25*l.* 10*s.* The fees for the Diploma Course amounted in all to 19*l.* for the first winter and 14*l.* for each of the second and third winters.

In reply to questions as to instruction in veterinary science, the witness said that there was a well-known difficulty in connection with such instruction. At Armstrong College they were very fortunate, however, in this respect. He did not think that the training given resulted in a smaller demand for the services of a veterinary surgeon; on the contrary, he thought that the veterinary bill of a farmer who had attended these lectures would probably be higher than that of one who had not.

The witness also said, in reply to a question, that he had found that the Farm School at Newton Rigg, in Cumberland, acted as a "feeder" for his department.

Professor Gilchrist handed in two papers* which he thought would be of interest as bearing on the Reference before the Committee. He also handed in a list showing the posts held by some past agricultural students of Armstrong College.

(e) **Mr. Dunstan.**

The witness said that at the present time there were at the South-Eastern Agricultural College, Wye, about 26 students who intended going in for estate management, and about 79 students who intended to farm. To obtain the College Certificate in either agriculture or horticulture a student must attend for at least six terms. For the Diploma nine terms was the minimum. The session started in October and ended in August. During the first term in the first year no distinction was made between the diploma and certificate students. After the first term it was possible to judge what a student's capabilities were and advise him what course to pursue.

During the first year both types of students were given a large amount of instruction in agriculture and attended farm classes. The points at which science touches agriculture were also explained. The certificate students were taught agricultural science, not pure science, but the diploma students devoted two years, beginning with the first year, to botany, and two years, beginning with the second year, to chemistry. He was of opinion that there was a distinct advantage in the teaching of science following that of agriculture. He would prefer scientific instruction being founded on a thorough grounding in agriculture than agriculture founded on a grounding in science. Asked as to whether he had come to this conclusion as a result of the practice obtaining in America, the witness said he was aware of the report recently published by Reading University College on this subject, but he had arrived at the conclusion he had stated as a result of his own experience and quite independently of that report.

Mr. Dunstan said that about 50 per cent. of his students had no knowledge of practical agriculture when they entered the College; some of the remainder had worked on farms. A student coming with a knowledge of farming undoubtedly made the better student provided his general education was satisfactory. There was a tendency among students who intended to become practical farmers to take longer courses. Of course, some students came to the College intending to farm after they leave, but after receiving their education they are attracted away from practical farming to take up agricultural appointments. Some of the students at the College take only the practical farm course, others go in for practical fruit-growing, others for horticultural science. The age of students varied considerably; none younger than 17 were, however, admitted.

Witness explained that both diploma and certificate students have to qualify during their first two years in practical farm work. He did not believe in keeping students at any form of practical work after they had become efficient, but all students were given facilities for doing more practical work if they so desired. It was compulsory, however, for a student to show that he could set a plough and adjust it for different kinds of work; milk a cow in a smart and efficient manner; harness a horse for plough, trace and shaft work—and so on.

Witness also described the course for the Degree of B.Sc. (Agric.) in the University of London, but said that that course was intended for agricultural teachers or experts. The College also provided a special Estate Management Course which lasted for two years, and prepared students for the examinations of the Surveyors' Institution. The curriculum for this course was much the same as that for the Diploma Course, except that certain subjects, *e.g.*, botany and veterinary science, were omitted and increased instruction given in building construction, surveying, agricultural law, and forestry.

The inclusive fee, Mr. Dunstan said, for board and tuition was 120*l.* a year; for tuition only, 70*l.* a year. For residents in Kent and Surrey the fee for board and tuition was 60*l.* a year, and for tuition only 15*l.* a year. Practically all the sons of farmers who attended the College came with scholarships; but, witness pointed out, that farmers' sons were, as a rule, at a disadvantage in competing with town lads for scholarships. The previous education of many of the students was very deficient, and their training in both science and English subjects was deplorable.

(When returning a corrected proof of the above summary Mr. Dunstan wrote as follows:—"I should like to point out that the College exists for the purpose of

* I. "Report on Farm Winter Schools in the Netherland," by D. A. Gilchrist (Reprinted from the Journal of the Board of Agriculture, Vol. XVI., August, 1909).

II. "The Education of the Young Farmer," an article which appeared in the Journal of the Royal Agricultural Society of England, Vol. LXII., 1901.

giving instruction in agriculture in its widest signification—the College is supported partly by contributions from the general body of ratepayers and does not cater for any one class of student but for all classes who intend to earn their livelihood in some branch of agriculture.”)

(*f*) **Mr. Evens.**

Mr. Evens said that the area of his farm was nearly 1,000 acres, of which about two-thirds was arable and one-third grass. In his earlier days he had studied the principles of agriculture for the Science and Art Department's examination. His son had attended the Midland Agricultural College at Kingston.

Witness said that in his opinion it was necessary to make the Agricultural Colleges as practical as possible, and he expressed agreement with the view of the previous witness (Mr. Dunstan) that a student should have a knowledge of practical agriculture before he begins to learn science. After a student had gained some practical experience he was then fitted to receive scientific instruction. If it were possible he would prefer a student to become acquainted with farming on his father's farm, before entering an agricultural college; but he recognises that in many cases, especially with a town lad, this was not possible. He approved of County Agricultural Scholarships being awarded, but thought that as far as practicable they should be limited to students who had had practical experience on a farm. After practical experience students would be more interested in, and better able to digest, further teaching, and they would be at an age to realise better the difference between working and “spending time.”

Asked as to whether he thought a College Diploma or Certificate was of value to a farmer, Mr. Evens replied that it was only the training that was of value, and that he did not think the Diploma itself would be of much help. He did not altogether agree with students going to a College during the winter months and returning to their father's farm during the summer; he thought that it was better for the course to be continuous. He suggested that the minimum course should be twelve months, because many farm operations only come round once a year.

With regard to the Midland Agricultural College, he was quite satisfied with the training which his son had received there. He knew that there was a proposal to raise the standard of the College, but he thought that if this were done it would alienate the sympathy of farmers in the neighbourhood. Comparatively few students from Lindsey had attended the course. There was, of course, a general prejudice among farmers to any type of agricultural education, mainly on the ground that the instruction was not practical enough. He thought that a county agricultural organiser would be useful in explaining the work of the College. In reply to a question, the witness said that a local six weeks' course would probably act as a “feeder” for the College. As a matter of fact, his son first went to the Midland College as a short-course student, but remained for the long course. Small farmers would be more likely to send their sons to an institution in the county itself.

Questioned as to the size of a college farm, Mr. Evens said that this should be at least 200 or 300 acres, and larger for preference, and it should include, if possible, variety of soil, and as many varieties of farm stock as practicable. He thought that a college farm would give a general idea of farming to a town lad, but the labour bill would, of course, be much heavier than a commercial farm could pay. He thought that the farm books kept at Colleges were rather elaborate, and were more than were necessary for a practical farmer.

Mr. Evens said that a student may be partial to one class of work, and there was often a tendency to keep students to one section of work. Their work should be made general, embracing all that goes on on a farm. A practical bailiff or manager should put the practical side of all farm work before the students, with the reasons and advantages of the same.

Questioned as to the maximum amount which a farmer might be expected to pay for a course for his son at an Agricultural College, he said that a *maximum* sum would be about 100*l.* per year, but this would only apply to well-to-do parents. Ordinary tenant farmers would not, and could not afford to pay so much. To encourage this class to send their sons the inclusive fees should not be more than 40*l.* to 50*l.* a year.

(*g*) **Professor Wood.**

The witness said that the University School of Agriculture was, broadly speaking, attended by two classes of students:—(*i.*) Future landowners who came to Cambridge to finish their education and took advantage of the existence of a School of

Agriculture to attend the lectures provided there; and (ii.) men who had taken the Natural Sciences Tripos and then decided to study for Part II. of the Diploma in Agriculture. These latter, who, Professor Wood said, numbered nearly half of the total, were exceedingly keen students, but as their intention was, for the most part, to obtain agricultural appointments, they did not fall within the terms of the Committee's Reference, and he, therefore, would confine his evidence to the first class of students.

The course at Cambridge commenced on the 1st October and finished in the middle of June in the next year but one. At first it was arranged that agricultural students should during their first year attend elementary lectures in pure science. This policy has, however, been changed as it was found that the students if sent to elementary science courses along with medical and other students failed to see the agricultural bearing of their work, and drifted away from agriculture. At the present time all the science was taught from an agricultural point of view by the agricultural staff. The witness then described how the various subjects were treated. In the first year's course in agriculture a general account of the subject was given. In the second year systematic husbandry was taught. In both cases the teaching was done by lectures, illustrated by farm classes, and part of the course was devoted to a discussion of agriculture as a business. Students were advised to reside on the University Farm at the end of the first year's course for a period of six weeks, when special classes were given. Professor Wood repeated that a lengthy course of elementary chemistry generally bored the farming student, especially if he were expected to attend along with students preparing for other occupations, such as medicine. The chemistry course should be agricultural from the beginning, and should not include too much or too complicated practical work. Botany, again, should be definitely agricultural, and should not include a great deal of microscopical work. Plant physiology should be the basis of the course, together with enough morphology to explain it. A systematic study should be made of plants interesting to farmers, including a few typical plant diseases, and a microbe, such as that responsible for milk souring. Seed testing should also be included under agricultural botany. The course in agricultural physiology should begin with just enough anatomy and histology to give the students a good general idea of the arrangement of the various important organs of the body. The rest of the course should include a more careful study of respiration, digestion, nutrition and reproduction in farm animals, and should conclude with farm hygiene. Other subjects, such as book-keeping, surveying, &c., should be taken as special courses later.

In reply to supplementary questions the witness said that the primary object in founding the Cambridge Department of Agriculture in 1899 was to establish a great school of agriculture which it was hoped would not only prove of value to the large number of landowners who attended the University, but also provide a sound training for the young men who wish for a career in agricultural science. There was a great difference between the Cambridge School and a residential agricultural College, and the remarks he had made as to the way subjects should be treated were possibly not of general application. Intending farmers and land agents formed only a small proportion, say, one-tenth, of the total number of students attending the School. By the generosity of the Surveyors' Institution, special scholarships were offered for intending land agents.

The witness handed in the following statement showing the number of students on the books of the Agricultural Department each term since 1908:—

Michaelmas Term, 1908	...	...	...	...	58
Lent Term, 1909	...	...	...	...	60
Easter Term, 1909	...	...	...	...	51
Michaelmas Term, 1909	...	...	...	...	81
Lent Term, 1910	...	...	...	...	91
Easter Term, 1910	...	...	...	...	88
Michaelmas Term, 1910	...	...	...	...	100
Lent Term, 1911	...	...	...	...	102
Easter Term, 1911	...	...	...	...	89
Michaelmas Term, 1911	...	...	...	...	106

All the above students, Professor Wood said, propose to take the two years' course. About 80 per cent. complete the course, and take the examinations.

APPENDIX III.

WRITTEN STATEMENTS RECEIVED BY THE COMMITTEE.

(I.) Professor Bryner Jones.

1. Courses intended for those whose object it is to take up farming, should, as far as possible, be of an "applied" character, *i.e.*, they should have a bearing from beginning to end upon agricultural practice, otherwise students are apt to lose sight of the value of the course, especially those who do not proceed to college direct from school.

2. It is impossible, however, for a student to follow intelligently what are described as agricultural subjects, without having devoted some time to pure science, particularly chemistry and botany.

3. It is difficult to frame a course of much value that can be covered in less than two full sessions (6 terms) or three Winter Sessions (6 terms). For those who intend becoming farmers, there is much to be said in favour of the Winter Session system, by which the student spends the winter months (October to March) at college and the summer months at a farm.

4. It is advisable that the "pure" science should be taken concurrently with agriculture, even from the first, *i.e.*, the student should not be called upon to devote the whole of his time during the first session to "pure" science and the second session entirely to "practical" objects. The "pure" science, however, should be covered during the first session, or during the first two winters, if the whole course consists of three Winter Sessions instead of two full sessions.

5. Students should have "farm" classes regularly during their course, *i.e.*, they should be taken to the College Farm (if such exists) or some other farm, and have the various farm operations, crops, and stock discussed with them.

In addition to this the writer has a system by which his students in turn write a report on the work in progress at the College Farm each week. The report is read in class at the beginning of the first lecture of the week, and criticised. Notice is then given to the student who is expected to read a report the following week. The present writer has found this an excellent means of keeping the students in touch with the farm.

6. While it is essential that the relation between science and practice should always be insisted upon and demonstrated, the writer is strongly of opinion that it is not the function of a college to touch the *business* of farming, and it should not attempt to do so further than what may be done in the lectures and farm classes.

At Aberystwyth, the agricultural students do not work in the farm, but individual students, especially those who are not farmers' sons, are encouraged to visit the farm as frequently as possible.

7. As to the subjects which should be included in the curriculum followed by the class of students in question, the following course of study, based upon that followed at Aberystwyth, is suggested:—

First Year.

Agriculture.
Chemistry.
Botany.
Animal Physiology and Hygiene.
Mensuration.
Geology.

Second Year.

Agriculture (including Engineering).
Agricultural Chemistry.
Agricultural Botany.
Book-keeping.
Land Surveying.
Entomology.
Agricultural Law (optional in the case of students who intend becoming farmers, but compulsory to those who intend to take up Land Agency).

For the three Winter Courses, the curriculum adopted at Aberystwyth may be recommended (*see* Prospectus, p. 13).

(II.) Mr. P. Hedworth Foulkes.

The Harper Adams Agricultural College was founded under the Will of the late Thomas Harper Adams, who left an estate and endowment for the purposes of a College. The Founder's intention was to benefit Agriculture by endowing a College where a scientific education would be provided at considerably less cost than would otherwise be the case, and at fees within the reach of the average tenant farmer.

Courses of instruction have been provided upon the following lines :—

- (a.) *Certificate Course* of two years duration, arranged for those who intend to farm.
- (b.) *Diploma Course* of a more advanced character, intended for those who are desirous of preparing for positions as land agents, agricultural teachers, &c.
- (c.) *Short Courses* intended entirely for farmers sons and others who have already spent a considerable time at farm work, and who are only able to leave home for a comparatively short time during the less busy season of the year.

*Certificate Course.**First Year.*

Agriculture. (Including Soils, Manures, Crops, Foods and Feeding Stuffs, also Practical Work.)
 Chemistry.
 Botany.
 Geology.
 Veterinary Science. (Including Physiology and Anatomy.)
 Mensuration.
 Horticulture.

Second Year.

Agriculture. (Live Stock, Labour, Buildings, Capital, Economics, General Farm Management, and Valuations, also Dairying and Poultry Management, and Practical Work.)
 Agricultural Chemistry.
 Agricultural Botany.
 Book-keeping. (Including complete set of Farm Accounts.)
 Veterinary Hygiene.
 Farm Engineering.

Most of the students taking the Certificate Course have done little, if any, science work before entering the College. "Pure" science is taken during the first year, and in order that an interest may be aroused, it is, as far as possible, given an agricultural character especially in Botany and Geology, while at the same time the student takes agriculture and practical work.

The advantage of this first year work is seen in the case of those students, who, wishing to shorten the time, only take the second year subjects of an "applied" character. In such cases, which are few, the want of a grounding in Chemistry and Botany is a serious drawback to their taking full advantage of the instruction given in the applied subjects.

The agriculture is of a practical character, and in addition to lectures, farm classes are held regularly throughout the course, and a complete record of farm work is kept by each student in a special farm diary, published for this purpose. In this way, the work done on the farm, the cost of cultivations, prices, &c., are recorded, and the student has a useful book of reference for future work. Students also attend the Newport Cattle Markets.

The "practical" work continues throughout the whole course, and includes: Management of Stock; Preparation of Foods and Feeding; Field Work; Milking; Dairying, management of Milk and Cream, Butter and Cheese making; Practical Carpentry and Blacksmith's work in the Shops; Poultry work, feeding and management.

The Diploma Course was formerly of two years duration, but has been recently rearranged as it was found that many students who entered had not done sufficient pure science work to be able to do justice to the subjects in two sessions, and frequently spent one year in the Certificate Course before entering upon the Diploma work. Under the new arrangement this will be done away with.

The following arrangement has been adopted :—

<i>First Year.</i>	<i>Intermediate Year.</i>
Chemistry.	Agriculture, Parts I. and II. (Including Practical Work.)
Botany.	Book-keeping.
Geology.	Agricultural Zoology.
Physics and Mechanics.	Veterinary Science. (Hygiene, Diseases, &c.)
Agriculture, Part I. (Including Practical Work.)	Bacteriology. (Summer Term.)
Book-keeping.	Agricultural Chemistry.
Agricultural Zoology.	Agricultural Botany.
Veterinary Science. (Anatomy and Physiology.)	Farm Engineering. (Implements, Building Construction, and Surveying. Field Work in Summer.)
Farm Engineering. (Mensuration, Implements and Machinery.)	

Final Year.

Agriculture, Part II. (Including Practical Work.)	Agricultural Botany.
Agricultural Chemistry.	Farm Engineering. (Implements, Building Construction, and Surveying. Field Work in Summer.)

In the case of students who have already done sufficient pure science before entering, and who are able to satisfy the College requirements, they proceed at once to the intermediate year, and are thus able to complete the course in two years.

A small proportion of Diploma students after completing the course, remain on to prepare for the Surveyors' Institute Examination and take a special course in Agricultural Law, Drainage and Water Supply, and Building Construction.

The majority of the students entering for the long courses (about 80 per cent.) take the Certificate Course with the view of becoming practical farmers, but quite an appreciable proportion of Diploma students also go in for farming.

The following extract from the last Annual Report of the College may be of interest :—

“Of those students who have passed through the College, their occupations, as far as it has been possible to ascertain, are as follows :—

Students engaged in Farming		238 = 80·4 per cent.
Land Agents		14 = 4·7 per cent.
Teaching Agricultural Science		15 = 5·0 per cent.
Entered other professions		7 = 2·4 per cent.”

A large proportion of students are sons of farmers, landowners, or persons directly connected with agriculture. While it is interesting to note this proportion, too much importance should not be placed upon the parent's occupation, providing the individual intends to follow the profession for which his training prepares him, as the education given is for the future benefit of the individual and not for the past benefit of the parent. Of those who have taken their training at the College, among the best and largest farmers to-day, are sons of business and professional men.

The College fees for board and tuition are 43*l.* for those coming from Shropshire and Staffordshire, and 60*l.* for those resident outside these two counties.

(III.) **Mr. W. J. Grant.**

Classes for Young Farmers in Monmouthshire.

What are termed “Classes for Young Farmers” have been arranged for in Monmouthshire for the purpose of giving practical and scientific training, the latter as far as may be considered necessary, to the sons of farmers and others who may wish to gain their livelihood upon the land either at home or in the Colonies. The age of those who attend the classes is from 15 years upwards, it being understood that the age of 25 is the limit. Those who join the classes are given to understand that they shall do so for not less than three years, and longer if possible. ●

The classes are arranged in such a manner that those who attend can both live at home and (except when attending the Hedging, Shearing, Cider-making Classes, and the Dairy School) be at work all day either on their father's farms or any other farm where they may be working or residing.

The class work is divided into two divisions, spring and autumn, in equal parts, but the practical work covers nearly the whole year, as in this way each of the young fellows who attend the classes keeps in touch with one member or other of the Agricultural Staff the whole year round.

Each candidate, or member of the classes, is examined in practical and paper work (*viva voce*) and also as to his knowledge of live stock by at least nine different outside examiners of high standing, including a Veterinary Surgeon, and at the conclusion of each year's examination a certificate is handed to each student stating the position the various examiners placed him in. Students who pass through a three years' course of instruction will be examined for a County Diploma at the conclusion of his course.

The course of class work each year includes Agricultural Chemistry, Botany, Veterinary Science, with the principles of Dairy Management; the practical work being Hedging, Thatching, Shearing, Cider-making and Bottling, Fruit Packing, Milking, and ten days' attendance at the Dairy School each year.

The fee charged for the year's course is 10s. 6d. Marks are registered for attendance, which, with the total amount of marks given by each examiner throughout the year, places each student or pupil in the exact position in which he should stand.

The Agricultural Education Committee, bearing in mind the fact that almost everyone who attends these classes is working during the day, and in many instances walking, riding, or cycling a long distance to attend the evening classes, present the student who gains the highest number of marks with a prize of 10*l.*, the second with 5*l.*, and the third with 2*l.* 10s. The winner of the 10*l.* prize, although continuing to attend the classes, is precluded from again winning any similar class prize in cash.

APPENDIX IV.

SUMMARY OF REPLIES RECEIVED TO A SCHEDULE OF QUESTIONS CIRCULATED BY THE CONFERENCE.

1. The following series of questions were circulated to each Member of the Conference, to each Chamber of Agriculture, and to each Farmers' Union in England and Wales. Copies of the Schedule of Questions were also forwarded to the Honorary Secretary of the Agricultural Education Association for the use of the members of the Association:—

- (a) At what ages should the students commence their course?
- (b) Is it desirable that the passing of an entrance examination should be insisted on? If so, what should be the standard of such examination?
- (c) Is it desirable that the students should have had practical experience in agricultural work before commencing their course and for what period?
- (d) Is it desirable to award County Agricultural Scholarships tenable at agricultural colleges to boys taken straight from the secondary schools?
- (e) What should be the character of the first year's course of training? Should science come first, or practical agriculture, or should both go on simultaneously? Should pure (as distinguished from applied) science be taught?
- (f) Should the ordinary courses for practical farmers be limited to two years, or to two winter sessions, or should they extend to a third year wherever students can be induced to stay so long?
- (g) Should either class of student be encouraged to work for diplomas or degree courses, or not?
- (h) Should the number of subjects in a two-year course be limited in order to give a thorough training in a few subjects rather than a superficial knowledge of a larger number? Should a distinction be made between compulsory and optional subjects?

- (i) What subjects are required by the estate manager over and above those required by the practical farmer?
- (j) Is it desirable that either class of student should devote a large portion of his training period to practical husbandry? and, if so, should this be made an integral part of the college course?
- (k) Should the agricultural colleges be encouraged to specialise in different directions, or should each college endeavour to give a complete course of agricultural training to each class of students?
- (l) Are different courses required for those students who intend to farm in the colonies or in foreign countries?
- (m) Is it essential that all teachers of these courses should have some knowledge of practical agriculture?

2. The following is a summary of the replies received from MEMBERS OF THE CONFERENCE to the above Schedule of Questions:—

- (a) The almost unanimous opinion was that students should not commence their course before 16 years of age. Many members regarded 18 years as the minimum age, especially in the case of lads who had not been brought up on a farm, and for students of the second class 18 to 20 was often mentioned as the minimum age.
- (b) It was generally considered desirable that an entrance examination should be insisted on, but many members expressed the opinion that the standard should not be too high. The unanimous opinion was that it should be a test of the student's general education [see also (c) below]. One member suggested that, as an alternative, students should produce evidence of having received a fair amount of education of a secondary character, and another pointed out that in the case of degree students the matriculation examination acts practically as an entrance examination.
- (c) The general opinion was that practical experience was desirable; most members thought it essential. Sons of farmers would usually have practical knowledge of farming; others should have had at least one year's (many members said two years') experience. One member suggested that, if possible, students should be brought before a Committee and their practical knowledge tested.
- (d) The replies showed a considerable difference of opinion existing. A number of members replied in the negative; a number had no objection subject to the requirements under (a) and (c) above, and by some of these the suggestion was made that scholarships might be awarded when the boy left the secondary school, but that it should not be tenable until he had acquired the necessary practical experience; a few members replied to this question in the affirmative.
- (e) On this subject also considerable difference of opinion existed. Many members thought that science and practical agriculture should be taught simultaneously and that it is necessary to teach pure science. One member thought that pure science was worthless to a farmer and should not be taught, and others suggested that science subjects should be taught by an agricultural scientist and that not strictly "pure" science should be taught.
- (f) Most members favoured three years provided students can be persuaded to stay for the third year. A few members thought two years or three winter sessions sufficient, and others suggested that only selected students should remain for the third year.
- (g) The majority of the replies showed that members were of opinion that students should work for a diploma or degree. Certain members pointed out that students work best when working for some qualification, such as a certificate or diploma. Some members thought that only estate agents should be encouraged to obtain degrees, others thought that for either class degrees were unnecessary and diplomas sufficient. Many agriculturists replied to the question in the negative.
- (h) The replies to the first question were practically unanimous and were in the affirmative. Most members were in favour of optional subjects; others only where different classes of students attended the College. A few members were opposed to optional subjects.

(i) The following subjects were suggested :—

Surveying and Levelling.
Construction of Farm Homesteads.
Forestry.
Local and Imperial Taxation.
Agricultural Valuations.
Agricultural Law (including Landlord and Tenant).
Estate Book-keeping.

- (j) The majority of the members were of opinion that students should obtain practical experience before commencing their course and that the instruction at the College should be mainly theoretical; at the same time students pursuing agricultural courses should be kept constantly in touch with practical agriculture. On the other hand, a large number of members replied that practical farm work should be made an integral part of the College course, and it was suggested by some that arrangements might be made by which the amount of practical work would vary in accordance with the experience of the students.
- (k) The general opinion was that each College should endeavour to give a complete course of training to each class of student, although regard should be had to the type of farming prevailing in the district served by the College. At the same time the opinion was generally expressed that in addition certain Colleges should devote special attention to certain subjects and make provision for special types of students.
- (l) The general view was that it would not be desirable to provide special courses for such students at Agricultural Colleges in this country, and that the ordinary courses would be of value to such students.
- (m) A large number of members replied in the decided affirmative, while others were of opinion that a thorough knowledge of practical agriculture should be possessed by all teachers of Agriculture and other practical subjects, but that in the case of other subjects it was not essential.

3. The following is a summary of the replies received from CHAMBERS OF AGRICULTURE and FARMERS' UNIONS. The great majority of the replies were evidently intended to apply almost entirely to students who intended to become practical farmers. Two Chambers and two Unions forwarded adverse resolutions.

- (a) Though a few societies were in favour of the students commencing at 14, and some few as late as 18, the general opinion inclined to a minimum of 16 up to 18 years of age.
- (b) A good number were adverse to any entrance examination, and several others thought it could be dispensed with provided a seventh standard elementary school certificate were produced. Of the whole replies about one-half favoured an examination, and a fair number were of opinion that it should be up to the seventh standard. Several were in favour of an examination in elementary agricultural subjects.
- (c) Only two associations thought that practical experience was not desirable. Of the remainder the majority were in favour of two years', rather than of one year's, practical training; a large number thought that experience was only necessary in the case of town bred boys and was immaterial in the case of farmers' sons.
- (d) A few were not in favour of awarding scholarships to boys leaving secondary schools; a large majority of the remainder were in favour of awarding these scholarships provided that the student had the necessary practical experience or that it was held over until he had gained it.
- (e) An overwhelming majority of the replies were in favour of science and practical agriculture being taught simultaneously. The general opinion was against the teaching of pure science except, it was suggested in some replies, in a three years' course.
- (f) The general opinion was in favour of two years at least with an extension to three wherever practicable; and the suggestion was made in several cases that financial help should be given to promising students to enable them to stay for the third year; extremely few favoured two

winter sessions and even these thought a third desirable. One suggested one whole year and two winter sessions on the ground that farmers could not spare their sons in the summer session.

- (g) Most of the replies were in favour of students working for diplomas and degrees, diplomas especially, if so advised by the college staff; several, however, thought that they were only useful in the case of students who intended to become estate managers.
- (h) Practically the whole of those who replied wished for a thorough training in a few subjects. The great majority favoured optional subjects and some wanted the students to choose from them; several were in favour of a few subjects, all compulsory.
- (i) Many of the societies gave no reply to this question. The following subjects were, however, suggested in other replies :—

Building Construction,
Forestry,
Drainage,
Surveying,
Incidence of Taxation,
Agricultural Valuations,
Advanced Book-keeping, and
Agricultural Law (including Landlord and Tenant).

- (j) A large majority were in favour of the student devoting a large portion of his training periods to practical husbandry and of making it an integral part of the course. Several wanted only so much practice as was needed to apply the science, and several wanted none at all, as the student would generally come to the college with practical knowledge and could acquire it during the vacations. Some suggested that the practical training should be devoted to the student's weak subjects.
- (k) The majority were in favour of a complete course, though several suggested that the student might specialise in his third year. Nearly all the replies, however, urged that the instruction should follow lines most suited to the district.
- (l) Opinion was about equally divided. Several thought that no attempt should be made to cater for students who intended to farm abroad but that such students should go to the schools provided in the country they have chosen. Many returned no answer.
- (m) A decided affirmative was the almost unanimous answer; and a few thought the only exception might be in the case of teachers of pure science; one or two thought it desirable but not absolutely essential.

4. A Committee of the AGRICULTURAL EDUCATION ASSOCIATION received and tabulated the replies received from members of the Association, and forwarded to the Conference the following summary :—

- (a) A minimum of 16 years.
- (b) The great majority are in favour of an examination. Opinion is divided as to the standard; some recommend an examination to include at least English and Arithmetic, the standard in such case being one that would determine whether the candidate's general education was such as would enable him to derive benefit at the Institution he intends to enter. Others recommend the usual school leaving certificate, or the Junior Local examinations (Oxford and Cambridge).
- (c) Replies were practically unanimous in favour of students gaining practical experience in agricultural work before commencing their course. The majority are in favour of two or more years, whilst the minority are in favour of at least one year.
A few are in favour of land agents having a year's experience in practical work.
- (d) To award, but to make tenable after practical experience has been gained, *see* (c).
- (e) For students who intend to become practical farmers an overwhelming majority are in favour of Practical Agriculture and Science being taught simultaneously.

Some pure science must necessarily be taught, but not of such a character as is required of students studying for a degree, who must study the various sciences altogether apart from their application.

- (f) The majority are in favour of three years, whenever students can be induced to stay.
- (g) The majority are in favour of encouraging students to work for a diploma or a degree.
- (h) The majority are in favour of limiting the number of subjects, and in not providing optional subjects.
- (i) A large number of subjects have been suggested; the most important would appear to be :—

Forestry.
Advanced Surveying.
Building Construction.
Agricultural Law.
Estate Management.
Drainage and Water Supply.

- (j) There is a considerable difference of opinion, some being in favour of a certain amount of practical husbandry during the College training, others being against it.
- (k) The general opinion is that all Colleges should give a complete course, and that special courses should be given where facilities offered.
- (l) There seems to be a general feeling that it is not possible to provide different courses for those who intend to farm in the colonies.
- (m) The majority are of opinion that it is desirable, but not essential.

APPENDIX V.

LIST OF AGRICULTURAL COLLEGES AND DEPARTMENTS IN ENGLAND AND WALES.

The following is a list of the Agricultural Colleges and Departments in England and Wales engaged in the provision of courses such as are referred to in the reference under consideration :—

Universities and University Colleges :

Aberystwyth, University College of Wales.
Bangor, University College of North Wales.
Cambridge, University of.
Leeds, University of.
Manchester, Victoria University.
Newcastle, Armstrong College.
Oxford, University of.
Reading, University College.

Agricultural Colleges :

Cirencester, Royal Agricultural College.
Holmes Chapel, College of Agriculture and Horticulture.
Kingston, Derby, Midland Agricultural and Dairy College.
Newport, Salop, Harper Adams Agricultural College.
Uckfield, Agricultural and Horticultural College.
Wye, South-Eastern Agricultural College.

Special Institution :

Harris Institute, Preston.

The above institutions are in receipt of grants from the Board of Agriculture and Fisheries. To these should be added the Agricultural College, Aspatria, Cumberland, which is not a public institution eligible to receive Government grants.

APPENDIX VI.

NUMBER, PARENTAGE AND OCCUPATIONS OF STUDENTS.

The following statements compiled from returns received from the institutions concerned show the number, parentage and occupations, or intended occupations, of present and past students :—

I.—STATEMENT OF THE NUMBER, &c., OF STUDENTS IN ATTENDANCE DURING FIRST TERM OF THE SESSION 1911-12.

Institution.	Course.	Number attending.	Parentage of Students.					Intended Occupation of Students.			
			Sons of Farmers.	Sons of Land-owners.	Sons of other persons connected with Agriculture.	Others (including those not known).	Farming.	Estate Management.	Agricultural Teaching.	Other Occupations (including those not known).	
Aberystwyth, University College of Wales.	Courses completed in :—										
	(1) Less than two academic years...	40	39	—	—	1	36	2	—	2	
	(2) Two academic years	3	1	1	1	—	1	2	—	—	
	(3) More than two academic years	15	8	—	3	4	—	—	11	4	
	Total	58	48	1	4	5	37	4	11	6	
Bangor, University College of North Wales.	Courses completed in :—										
	(1) Less than two academic years...	18	17	—	—	1	17	—	—	1	
	(2) Two academic years	8	5	—	—	3	7	—	1	—	
	(3) More than two academic years	12	2	—	—	10	4	5	3	—	
	Total	38	24	—	—	14	28	5	4	1	
*Leeds, University of ...	Courses completed in :—										
	(1) Less than two academic years...	—	—	—	—	—	—	—	—	—	
	(2) Two academic years	27	9	—	1	17	24	2	1	—	
	(3) More than two academic years	21	11	—	1	9	17	—	4	—	
	Total	48	20	—	2	26	41	2	5	—	
Newcastle-on-Tyne, Armstrong College.	Courses completed in :—										
	(1) Less than two academic years...	30	21	—	—	9	30	—	—	—	
	(2) Two academic years	—	—	—	—	—	—	—	—	—	
	(3) More than two academic years	28	6	6	3	13	11	8	6	3	
	Total	58	27	6	3	22	41	8	6	3	
†Reading, University College.	Courses completed in :—										
	(1) Less than two academic years...	14	4	—	1	9	10	1	1	2	
	(2) Two academic years	38	6	8	1	23	19	10	5	4	
	(3) More than two academic years	—	—	—	—	—	—	—	—	—	
	Total	52	10	8	2	32	29	11	6	6	
Aspatria, Cumberland, Agricultural College.	Courses completed in :—										
	(1) Less than two academic years...	18	1	5	3	9	11	7	—	—	
	(2) Two academic years	3	—	—	—	3	2	1	—	—	
	(3) More than two academic years	7	—	—	—	7	1	6	—	—	
	Total	28	1	5	3	19	14	14	—	—	
Cirencester, Royal Agricultural College.	Courses completed in :—										
	(1) Less than two academic years...	18	—	13	—	5	8	10	—	—	
	(2) Two academic years	8	—	6	—	2	5	3	—	—	
	(3) More than two academic years	56	6	33	2	15	34	20	2	—	
	Total	82	6	52	2	22	47	33	2	—	
Holmes Chapel, Cheshire, College of Agriculture and Horticulture.	Courses completed in :—										
	(1) Less than two academic years...	2	—	1	1	—	2	—	—	—	
	(2) Two academic years	1	—	—	1	—	1	—	—	—	
	(3) More than two academic years	48	13	15	8	12	39	4	5	—	
	Total	51	13	16	10	12	42	4	5	—	

* Students taking short courses in dairying at the Garforth Farm are not included under Leeds University.

† Twenty-five students taking horticultural courses at University College, Reading, are not included in the above statement.

I.—STATEMENT OF THE NUMBER, &c., OF STUDENTS IN ATTENDANCE DURING FIRST TERM OF THE SESSION, 1911-12—*cont.*

Institution.	Course.	Number attending.	Parentage of Students.				Intended Occupation of Students.			
			Sons of Farmers.	Sons of Land-owners.	Sons of other persons connected with Agriculture.	Others (including those not known.)	Farming.	Estate Management.	Agricultural Teaching.	Other Occupations (including those not known).
Kingston, Derby, Midland Agricultural and Dairy College.	Courses completed in :—									
	(1) Less than two academic years...	48	33	1	—	14	42	—	6	—
	(2) Two academic years	5	1	—	—	4	2	2	1	—
	(3) More than two academic years	1	—	—	—	1	—	—	1	—
	Total	54	34	1	—	19	44	2	8	—
Newport, Salop, Harper-Adams Agricultural College.	Courses completed in :—									
	(1) Less than two academic years..	6	5	—	—	1	6	—	—	—
	(2) Two academic years	40	5	6	6	23	37	3	—	—
	(3) More than two academic years	19	7	1	2	9	5	11	3	—
	Total	65	17	7	8	33	48	14	3	—
Preston, Harris Institute	Courses completed in :—									
	(1) Less than two academic years...	—	—	—	—	—	—	—	—	—
	(2) Two academic years	—	—	—	—	—	—	—	—	—
	(3) More than two academic years	54	30	—	3	21	41	1	1	11
	Total	54	30	—	3	21	41	1	1	11
Uckfield, Agricultural and Horticultural College.	Courses completed in :—									
	(1) Less than two academic years...	1	1	—	—	—	1	—	—	—
	(2) Two academic years	30	8	7	1	14	27	3	—	—
	(3) More than two academic years	1	—	1	—	—	1	—	—	—
	Total	32	9	8	1	14	29	3	—	—
Wye, Kent, South-Eastern Agricultural College.	Courses completed in :—									
	(1) Less than two academic years...	27	—	4	1	22	9	9	6	3
	(2) Two academic years	60	4	13	5	38	46	8	1	5
	(3) More than two academic years	54	6	5	1	42	24	9	15	6
	Total	141	10	22	7	102	79	26	22	14
Total for 13 Institutions	Courses completed in :—									
	(1) Less than two academic years...	222	121	24	6	71	172	29	13	8
	(2) Two academic years	223	39	41	16	127	171	34	9	9
	(3) More than two academic years	316	89	61	23	143	177	64	51	24
	Total	761	249	126	45	341	520	127	73	41

II.—STATEMENT OF THE NUMBER, &c., OF STUDENTS WHO HAVE LEFT DURING THE THREE ACADEMIC YEARS, 1908–11.

Institution.	Course.	Number who have left during 1908–1911.	Parentage of Students.				Occupation of Students.			
			Sons of Farmers.	Sons of Land-owners.	Sons of other persons connected with Agriculture.	Others (including those not known).	Farming.	Estate Management.	Agricultural Teaching.	Other Occupations (including those not known).
Aberystwyth, University College of Wales.	Courses completed in :—									
	(1) Less than two academic years...	104	93	—	—	11	90	—	—	14
	(2) Two academic years ...	4	3	—	—	1	1	2	—	1
	(3) More than two academic years	5	3	—	—	2	1	—	3	1
	Total ...	113	99	—	—	14	92	2	3	16
Bangor, University College of North Wales.	Courses completed in :—									
	(1) Less than two academic years ..	61	52	—	—	9	56	—	—	5
	(2) Two academic years ...	8	7	—	1	—	6	1	—	1
	(3) More than two academic years	6	2	—	—	4	2	1	2	1
	Total ...	75	61	—	1	13	64	2	2	7
*Leeds, University of ...	Courses completed in :—									
	(1) Less than two academic years...	16	6	—	2	8	12	1	—	3
	(2) Two academic years ...	24	11	1	—	12	20	3	1	—
	(3) More than two academic years	18	9	—	1	8	9	4	3	2
	Total ...	58	26	1	3	28	41	8	4	5
†Newcastle-on-Tyne, Armstrong College.	Courses completed in :—									
	(1) Less than two academic years...	95	74	1	—	20	85	4	—	6
	(2) Two academic years ...	—	—	—	—	—	—	—	—	—
	(3) More than two academic years	13	8	—	—	5	4	—	6	3
	Total ...	108	82	1	—	25	89	4	6	9
Aspatria, Cumberland, Agricultural College.	Course completed in :—									
	(1) Less than two academic years...	39	6	9	4	20	25	10	—	4
	(2) Two academic years ...	4	1	1	—	2	4	—	—	—
	(3) More than two academic years	14	—	2	1	11	4	6	—	4
	Total ...	57	7	12	5	33	33	16	—	8
Cirencester, Royal Agricultural College.	Courses completed in :—									
	(1) Less than two academic years...	62	2	33	1	26	37	8	—	17
	(2) Two academic years ...	20	2	18	—	—	10	9	—	1
	(3) More than two academic years	36	4	19	2	11	20	13	—	3
	Total ...	118	8	70	3	37	67	30	—	21
Holmes Chapel, Cheshire, College of Agriculture and Horticulture.	Courses completed in :—									
	(1) Less than two academic years...	16	6	4	4	2	7	1	1	7
	(2) Two academic years ...	10	3	3	3	1	10	—	—	—
	(3) More than two academic years	26	8	9	7	2	18	5	2	1
	Total ...	52	17	16	14	5	35	6	3	8
Kingston, Derby, Midland Agricultural and Dairy College.	Courses completed in :—						No statistics as to the future occupation of students have been kept in the past. Intention of very large majority to engage in farming or dairying.			
	(1) Less than two academic years...	405	250	—	8	147				
	(2) Two academic years ...	7	4	—	1	2				
	(3) More than two academic years	—	—	—	—	—				
	Total ...	412	254	—	9	149				
Newport, Salop, Harper-Adams Agricultural College.	Courses completed in :—									
	(1) Less than two academic years...	49	33	4	3	9	43	—	2	4
	(2) Two academic years ...	74	23	9	7	35	64	2	2	6
	(3) More than two academic years	20	2	3	3	12	8	4	6	2
	Total ...	143	58	16	13	56	115	6	10	12

* Students who have taken short courses in dairying at the Garforth Farm are not included under Leeds University.

† Thirty-seven students who attended a twelve-weeks' course in dairying at Armstrong College are not included in the above statement.

II.—STATEMENT OF THE NUMBER, &c., OF STUDENTS WHO HAVE LEFT DURING THE THREE ACADEMIC YEARS, 1908–11—*cont.*

Institution.	Course.	Number who have left during 1908–1911.	Parentage of Students.				Occupations of Students.			
			Sons of Farmers.	Sons of Land-owners.	Sons of other persons connected with Agriculture.	Others (including those not known).	Farming.	Estate Management.	Agricultural Teaching.	Other Occupations (including those not known).
Preston, Harris Institute	Courses completed in :—									
	(1) Less than two academic years...	32	14	—	1	17	20	—	3	9
	(2) Two academic years	18	6	—	4	8	9	—	—	9
	(3) More than two academic years	33	24	—	1	8	21	—	3	9
	Total	83	44	—	6	33	50	—	6	27
Uckfield, Agricultural and Horticultural College.	Courses completed in :—									
	(1) Less than two academic years...	7	4	1	2	—	5	—	—	2
	(2) Two academic years	53	17	8	—	33	40	3	1	14
	(3) More than two academic years	—	—	—	—	—	—	—	—	—
	Total	65	21	9	2	33	45	3	1	16
Wye, Kent, South-Eastern Agricultural College.	Courses completed in :—									
	(1) Less than two academic years...	114	5	23	7	79	67	12	2	33
	(2) Two academic years	30	1	1	1	27	19	7	2	2
	(3) More than two academic years	67	4	12	4	47	23	20	19	5
	Total	211	10	36	12	153	109	39	23	40
Total for 12 Institutions	Courses completed in :—									
	(1) Less than two academic years...	1000	545	75	32	348	447*	36*	8*	104*
	(2) Two academic years	257	78	41	17	121	183*	27*	6*	34*
	(3) More than two academic years	238	64	45	19	110	110	53	44	31
	Total	1495	687	161	68	579	740*	116*	58*	169*

* These totals do not include the Midland Agricultural and Dairy College, Kingston, Derby.

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

SIXTH REPORT
OF THE
RURAL EDUCATION CONFERENCE.

CO-ORDINATION OF AGRICULTURAL
EDUCATION.

Presented to Parliament by Command of His Majesty.



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1912.

[Cd. 6273.] *Price 2½d.*

This Report was prepared by the Rural Education Conference, which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June, 1910 (H.C. 63, 1910).

The following is a list of the earlier Reports of the Conference, copies of which may be purchased either directly or through any Bookseller, from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C. :—

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RURAL EDUCATION CONFERENCE.

SIXTH REPORT.

1. The following reference received from the Board of Agriculture and Fisheries has been considered by the Conference :—

To consider and advise as to the co-ordination of the work of the Agricultural Staffs employed by counties and by collegiate centres serving the area in which the county is situated having regard to :—

- (1) The necessity for linking up local work with that of institutions responsible for higher education and technical advice ;
- (2) The advantages of co-operation between counties in making provision for certain branches of agricultural instruction and in establishing farm institutes and schools ;
- (3) The need for maintaining the supervision of Local Education Authorities over the Agricultural Staffs employed within their administrative areas.

COMPARISON WITH SCOTLAND.

2. We have adopted the Report of a Committee presided over by Lord Barnard which held two meetings to consider this reference. It appeared that sufficient information as to the extent to which the work of county agricultural staffs and that of collegiate centres in England and Wales are at present co-ordinated was already available,* and we did not consider it necessary to obtain verbal evidence on this subject. We thought it was desirable, however, in considering whether any, and if so, what, improvements could be made in the existing arrangements in England and Wales to obtain definite information as to the system in operation in Scotland. From the summary of the evidence† received from Sir John Struthers, Secretary to the Scotch Education Department, it will be seen that there is in Scotland a much more systematic organisation than is to be found in England. In 1896, when the administration of the Government grants to the agricultural colleges in Scotland was transferred from the Board of Agriculture to the Scotch Education Department there were three institutions in Scotland in receipt of grants for agricultural education having little or no connection with the districts in which they were situated while, at the same time, local authorities were providing classes and lectures in agricultural subjects having no connection with the work of the three principal institutions. The aim of the Scotch Education Department since 1896 has been to make these three institutions responsible for the agricultural education of the whole of Scotland, and by dividing the country into three provinces or districts, one of which is allocated to each institution, the Department has succeeded in making the agricultural education provided in each province “one and indivisible.”

3. The Scottish system is briefly as follows :—At the head of each of the three provinces is the agricultural college ; each county in the province is definitely connected with the college, and it is an essential feature of the scheme that no county undertakes any work in agricultural education except through the college. The college is managed by a Board of Governors on which there are representatives of the affiliated counties in proportion to the amount of the county contribution (to which we refer in the next paragraph) together with representatives of other agricultural and educational interests in the province. The college provides the usual central classes, and the statistics included in Sir John Struthers' evidence show

* See Departmental Committee on Agricultural Education in England and Wales. Report [Cd. 4206] ; Minutes of Evidence [Cd. 4207], 1908 (price 9d. and 5s. 3d. respectively) ; and Report of the Board of Agriculture and Fisheries on the Distribution of Grants for Agricultural Education and Research in 1908-9 and 1909-10 [Cd. 5388], 1910 (price 7½d.). London : Wyman & Sons.

† See Appendix I.

how largely the attendance at these classes has increased since the present system was inaugurated; in addition, the college undertakes extension work in each of the counties in its area. In each county there is at least one county lecturer, assisted by other lecturers in special subjects as required; this lecturer is a member of the college staff, appointed and paid by the Governing Body. The local county work is controlled by a County Committee appointed by and reporting to the College Board of Governors. A reference to the statement printed in Appendix I. will show the extent of the extension work undertaken by the Colleges. Sir John Struthers stated that although the Department experienced considerable difficulty in inaugurating the present scheme, it was now regarded everywhere as a success, and there was no suggestion to return to the system of each county working by itself.

4. After careful consideration, we are of opinion that it would not be practicable to recommend that the Scottish system should in its entirety be adopted in England. Some fifteen or twenty years ago it might have been possible to have inaugurated a similar system in this country, but at the present time when, as will be seen from the first Report of the Conference,* the great majority of counties have some separate agricultural staff of their own, it would be exceedingly difficult to concentrate in a few central institutions the whole provision for agricultural education. Moreover, Sir John Struthers said that in the early years of the working of the Scottish system, the whole scheme might have collapsed had a few dissatisfied counties withdrawn their grants from the Central Institution, and made direct provision for themselves, and that it was not until Parliament in 1908 by the Education (Scotland) Act withdrew the Residue Grants under the Local Taxation (Customs and Excise) Act, 1890, from County Councils and paid these Grants into one fund administered by the Scotch Education Department that the scheme was placed on a stable footing. Similar legislation would, therefore, be necessary for England and Wales before the Scottish system could be completely adopted, and any proposal to withdraw from County Councils in England the whole or any part of the "Whiskey Money" would probably meet with much opposition. We do not, however, think that such a step is either desirable or necessary in the interests of agricultural education, but we are of opinion that considerable improvement could be effected in the present system by administrative means. Before we make suggestions to this end, it will be necessary to state shortly the present position.

PRESENT POSITION IN ENGLAND AND WALES.

5. In the Report referred to above, we showed that County Councils make provision for agricultural education in three ways, viz. :—

- (1) Wholly by means of a staff employed by the county itself;
- (2) Wholly by means of the staff of a central institution; and
- (3) Partly by means of a county staff and partly by means of an institution.

6. Of the sixty-one Administrative Counties in England and Wales (omitting London), twenty have no connection with any central institution. Further, the only grouping of counties in England and Wales, at present, is for the purpose of maintaining or supporting a University Agricultural Department, or an Agricultural College or School. In some cases the connection between the county and the centre is complete (that is, a large amount of work is carried out by the centre for the county, and no work is done by the county except through the centre), and in other cases the connection is partial (the college placing the services of its staff at the disposal of the county in return for an annual grant).

7. At the present time there is little or no co-ordination between the work of the agricultural staffs employed by counties and by collegiate centres serving the area in which the county is situated, and, generally speaking, the larger the separate county staff the less co-ordination exists. The best examples of co-ordination are probably to be found in those areas served by a Farm School as well as a collegiate centre, and as an illustration of such co-ordination, information will be found in Appendices III. and IV. with regard to two of the Farm Schools named in paragraph 9.

* Report on County Staffs of Instructors in Agricultural Subjects. [London : Messrs. Wynon & Sons, 1910, 1d.]

8. The following is a list of the Central Institutions, with the names of the counties with which they are connected :—

<i>Institution.</i>	<i>Counties.</i>
Aberystwyth, University College of Wales.	Brecon, Cardigan, Carmarthen, Merioneth, Montgomery, Pembroke and Radnor.
Bangor, University College of Wales.	North Anglesey, Carnarvon, Denbigh, Flint.
Cambridge, University of	Bedford, Cambridge, Essex, Hertford, Huntingdon, Isle of Ely, Norfolk, Northampton and East and West Suffolk.
Leeds, University of	Three Ridings of Yorkshire.
Newcastle-upon-Tyne, Armstrong College	Cumberland, Durham, Northumberland, Westmorland.
Reading, University College	Berks, Bucks, Hants, Middlesex and Oxford.
Kingston, Derby, Midland Agricultural and Dairy College.	Derby, Leicester, Lincoln (Lindsey) and Notts.
Newport, Salop, Harper-Adams Agricultural College.	Salop and Stafford.
Wye, Kent, South-Eastern Agricultural College.	Kent and Surrey.

It will be seen that some of the counties situated in the south-west, west and west-midland districts of England are not included in the above list, there being at present no institutions engaged in the provision of higher agricultural education with which those counties could conveniently be connected.

9. To make this summary complete, it is necessary to include the following institutions also in receipt of Government grants in respect of higher agricultural instruction :—

(a) *Institutions not definitely connected with any county :—*

University of Oxford.
University of Manchester.
Royal Agricultural College, Cirencester.
Horticultural College, Swanley, Kent.
Royal Horticultural Society's School, Wisley, Surrey.
British Dairy Institute, Reading.

(b) *Institutions acting for a single county :—*

Harris Institute, Preston (*Lancashire*).
Holmes Chapel, College of Agriculture and Horticulture (*Cheshire*).
Uckfield, Agricultural and Horticultural College (*East Sussex*).

To these must be added four institutions of the nature of farm schools, viz. :—

Basing Farm School (*Hampshire*).
Newton Rigg, Penrith, Farm School (*Cumberland and Westmorland*).
Chelmsford County Laboratories (*Essex*).
Ridgmont, Agricultural Institute (*Bedfordshire*).

RECOMMENDATIONS.

10. A development which has an important bearing on the subject of our reference has recently taken place in connection with the scheme for the promotion of agricultural research, for the purposes of which the Treasury has sanctioned a grant to the Board of Agriculture and Fisheries. We understand that with a view to the provision of technical advice to farmers and the investigation of local agricultural problems* the Board has announced its intention to make special grants to 12 institutions which will form the centres of as many areas, so arranged as to cover the whole of England and Wales. We understand also that the nine central institutions named in paragraph 8 have been asked if they would be willing to undertake to provide technical advice for farmers in the counties with which they are at present connected and, in some cases, in certain additional counties in their neighbourhood. It is also understood that a similar enquiry has been made of the

* See Memorandum A. 209/I issued by the Board of Agriculture and Fisheries, September, 1911.

following three institutions with regard to the counties not covered by the nine centres above-named, viz., the University of Manchester (in association with the College of Agriculture and Horticulture, Holmes Chapel, Cheshire), the University of Bristol, and the Agricultural College about to be established under the Seale-Hayne bequest; we understand that one of these three, the University of Bristol, has already complied with the conditions on which the special grants were offered. It would, therefore, appear that there is a prospect of there shortly being 12 Divisions for the purposes of Advisory Work, each served by an institution engaged in agricultural education or research. It has frequently been urged in the past by persons engaged in the administration of agricultural education that the county is too small a "unit" for *all* forms of agricultural instruction, and we are of opinion that the most important requirements for the proper co-ordination of the different branches of agricultural instruction in the future is that the 12 Divisions about to be formed for Advisory Work should, in the interests of efficient and economical administration, be regarded as the "units" for the purposes of agricultural education.

11. As the result of the various grants promised from the Development Fund, it is hoped that in the near future there will be a considerable increase in the facilities provided for agricultural instruction, especially in the lower branches, and as the cost of this increase must to a great extent be met from money provided by the central Government, we feel that an effort should be made in distributing these additional grants to co-ordinate all forms of agricultural education. In each Division the various means of instruction may be divided into two groups, each of which need separate consideration:—

- (a) Courses of instruction carried on within an institution, whether a university agricultural department, agricultural college, or farm institute.
- (b) Local lectures, classes and visits to farms carried on outside an institution, whether by members of the county staff or by members of the central institution.

12. With regard to the first group, we are of opinion that the responsibility for this form of instruction must remain with the Governing Body of the particular institution. This body would no doubt in the case of an institution associated with more than one county contain representatives of all the associated counties.

13. It is in the organisation of the forms of instruction included in group (b) that we recommend that a considerable change should be made. Many counties in the past have been unable to provide by themselves such means of instruction as a travelling dairy school, farriery van, whole-time horticultural instructor, and itinerant cheese instructor, and in all except the larger counties the only efficient and economical means by which such instruction can be provided is by co-operation between neighbouring counties. So far, however, such co-operation has not taken place, except, as explained in paragraph 6, for the purpose of maintaining or supporting an institution through which, in some cases, such instruction is given. We think it is necessary, therefore, that some machinery should be created by which this co-operation can be more easily effected. We recommend that in each of the 12 Divisions there should be constituted, under a scheme drawn up by the Board of Agriculture and Fisheries, a Joint Council for Agricultural Education. Such Council might consist of representatives of each county council, of each institution engaged in the provision of agricultural education in the area, and of certain agricultural societies and organisations within the district. Power might also be given to co-opt a limited number of specially qualified persons. The functions of the Joint Council would primarily be to promote the organisation of the different forms of instruction included in group (b) above, and to co-ordinate the whole of the agricultural education of the Division. It would be consulted by the Board as to every important application for a grant from central funds for the promotion of agricultural education in the Division, especially with a view to secure the co-operation of counties other than the one making the application. For reasons which will be given later, the functions of the Joint Councils are not likely to be identical in each Division. In certain cases the Council would be the executive body, responsible for the conduct of all forms of agricultural education in its Division; elsewhere the Joint Council might be given powers of supervision and co-ordination only; and in other areas the Joint Council would, at any rate, at first, be only an

Advisory Body whom the Board of Agriculture would consult before awarding grants to any of the authorities engaged in the provision of agricultural education in the Division.

14. The Joint Council would not, in most Divisions, engage a staff of its own, but would recommend the Board of Agriculture and Fisheries to pay grants in aid of the cost of the staff of instructors employed by the Local Authority or the institution. Counties should inform the Joint Council before engaging any instructors they may require in such subjects as bee-keeping, poultry keeping, manual processes of agriculture, &c., so that the Joint Council might, wherever possible, arrange that such instructors should be employed in several counties in the same Division. If this were done, such instructors would become much more efficient, having greater opportunities of studying local conditions throughout the Division than instructors restricted to one county alone. In the same way, County Councils should arrange for field experiments and demonstrations carried on in their area to be conducted on lines approved by the Joint Council for the Division as a whole.

15. In many cases it will doubtless prove convenient for the Joint Council to take the initiative in the establishment of a farm institute where the formation of such an institution by any one county alone does not appear to be practicable. But, in our opinion, after the school has been started, it would be desirable that, as is the case with the Farm School at Newton Rigg, Cumberland, the management should be placed in the hands of a committee appointed for the purpose by the councils of the counties in connection with which the school is working. It will be necessary, however, that the Joint Council should be represented on the Managing Committee of each Farm School or Institute in the Division by a member who is not the representative of that institution on the Joint Council.

16. The amount of the expenditure and the character of the work in the twelve Divisions which have been provisionally decided upon vary considerably and in some of the Divisions the proposed central institution at present either does not exist or has taken no active part in the promotion of agricultural education. It will be impossible, therefore, for a uniform system to be established at once in each Division, and the functions of the Joint Councils must consequently differ in different Divisions. If, for instance, the three Ridings of Yorkshire are regarded as one Division, the existing Joint Council for Agricultural Education in Yorkshire* might become the authority for the Division through which all branches of agricultural education might readily be co-ordinated. On the other hand, in Divisions in which either there is at present no central institution, or the central institution plays a less important part in the work of the Division, the Joint Council would have at first more difficulty in co-ordinating all branches of instruction. But in such a Division the Council could at least co-ordinate the extension work at present undertaken by the central institution, if any, with the work of the agricultural staffs of the counties within the area, and arrange for the uniform conduct of field experiments throughout the Division and for the interchange of instructors.

(Signed) HENRY HOBHOUSE

(Chairman).

13th June, 1912.

* For information as to this Council see Appendix II.

LIST OF APPENDICES.

- Appendix I. Summary of Evidence received from Sir John Struthers, K.C.B., LL.D.
- Appendix II. Particulars of the Organisation set up in Yorkshire for the furtherance of Agricultural Education.
- Appendix III. Co-ordination of the Work at Newton Rigg Farm School with Armstrong College, Newcastle-upon-Tyne.
- Appendix IV. Co-ordination of the work at Basing Farm School with University College, Reading.
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APPENDIX I.

SUMMARY OF THE EVIDENCE RECEIVED FROM SIR JOHN STRUTHERS, K.C.B., LL.D., Secretary to the Scotch Education Department.

Sir John Struthers said that in 1896 the Scotch Education Department took over from the Board of Agriculture the administration of the Government grants to the agricultural colleges in Scotland. At that time there were three central institutions, viz. (1) the Agricultural Department of the Glasgow and West of Scotland Technical College, (2) the School of Rural Economy at Edinburgh, which was an agency for the distribution of grants to various institutions in Edinburgh, including the University, Heriot-Watt College, Veterinary College and Botanic Gardens, and (3) the Agricultural Department of the University of Aberdeen. For two or three years the Department continued to make grants on the lines on which they had been made by the Board of Agriculture. At this time agricultural classes were being conducted throughout the country under the Continuation Code but no co-ordination existed between these classes and the work of the agricultural colleges. It, therefore, became the policy of the Department to bring the two into touch and to make the scheme of agricultural education a coherent whole.

They first directed their attention to the south-west of Scotland, and opened negotiations with the Glasgow College and the Dairy School at Kilmarnock. After a conference arranged by the Department with representatives of these two institutions and of the counties interested, and after lengthened negotiations with all authorities concerned, a scheme for the establishment of an agricultural college, of which the Dairy school should form part, was finally adjusted in 1899 and received the assent of all parties to the negotiations. Each of the counties in the south-west of Scotland and some burghs agreed to support the College from the Residue Grant. A new body of managers was formed consisting of representatives of contributing Town and County Councils—the representation being based on the amount of the contribution—and of other authorities interested, such as the University and the Highland and Agricultural Society.* An essential feature of the scheme was that no county should in future undertake any agricultural education work except through the College. In 1901 similar steps were taken in the south-east of Scotland, the counties combining to take over the management of the School of Rural Economy at Edinburgh, and in 1904, with the consent of the University authorities, a similar scheme was made with regard to the Agricultural Department of Aberdeen University.

Sir John then gave some statistics to show the expansion which had taken place since 1896 in both work and expenditure :—

* See note at the end of Appendix I.

College.	Number of Teachers.	Number of Students.	Number of Extension Lectures, &c.	Total Expenditure on Maintenance.	Total Grants.
ABERDEEN AND NORTH OF SCOTLAND COLLEGE OF AGRICULTURE. (a) 1896.	4	Students 8 Teachers' Classes 18	Nil.	£1,170	£ From Board of Agriculture 150 From Town and County Councils 445
	34	Full Course 82 Month's Courses for Farmers and Foresters 59 Teachers' Classes 146 Total 287	Lectures and Demonstrations ... 1,586 Attendances thereat 48,409 Visits to Farms and Crofts ... 7,427 Field Experiment Centres 700	£12,577	£ From Department's Vote 5,163 From Education (Scotland) Fund ... 5,628 Total 10,791
	(Students attended the University, Heriot-Watt College, Veterinary College, and Botanic Gardens.)	Day 54, Evening 104 = ... 158 Teachers' Classes 30	Nil.	£1,322	£ From Board of Agriculture 550 From Town and County Councils ... 621
(b) 1910-11.	31	Day 114, Evening 278 = ... 392 Month's Course for Farmers Teachers' Classes 63 Total 493	Number of Lectures 1,449 Attendances at Lectures 36,610 Experiment Centres 89 + Central Station.	£7,393	From Department's Vote 3,250 From Education (Scotland) Fund ... 3,248 Total 6,498
	11	College { Day 58 Evening 65 Kilmarnock Dairy School ... 244	Lectures 53 Attendances 1,854 Experiment Centres 89 Dairying Courses 5 Pupils 60	£3,370	£ From Board of Agriculture 950 From Town and County Councils ... 624
	39	College { Day 95 Evening 146 Farmers' Course 46 Kilmarnock Dairy School ... 287	Lectures 915 Attendances 24,535 Experiments 221 Dairying Lectures 365 Attendances 5,048	£12,347	£ From Department's Vote 5,136 From Education (Scotland) Fund ... 5,628 Total 10,764
WEST OF SCOTLAND AGRICULTURAL COLLEGE. (a) 1896.	11	College { Day 58 Evening 65 Kilmarnock Dairy School ... 244	Lectures 53 Attendances 1,854 Experiment Centres 89 Dairying Courses 5 Pupils 60	£3,370	£ From Board of Agriculture 950 From Town and County Councils ... 624
	39	College { Day 95 Evening 146 Farmers' Course 46 Kilmarnock Dairy School ... 293	Lectures 915 Attendances 24,535 Experiments 221 Dairying Lectures 365 Attendances 5,048	£12,347	£ From Department's Vote 5,136 From Education (Scotland) Fund ... 5,628 Total 10,764
	(Students attended the University, Heriot-Watt College, Veterinary College, and Botanic Gardens.)	Day 54, Evening 104 = ... 158 Teachers' Classes 30	Nil.	£1,322	£ From Board of Agriculture 550 From Town and County Councils ... 621
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With regard to the above figures Sir John explained that the Aberdeen College served a district of crofters and small holders, and the operations of the College took a distinctive character accordingly as compared with the other two colleges.

At first the Government contribution to the three Colleges was made from the Agricultural Relief Fund (Local Taxation Account (Scotland) Act, 1898) and partly from special grants from the Treasury, but in 1903 the Treasury agreed that a grant should be made under the Continuation Class Code equal to one-half of the total net maintenance expenditure approved by the Department, provided that there was an equivalent local contribution. Practically the whole of the capital expenditure has been met by grants from Local Taxation Funds.

It was a defect in the scheme at first that any County being dissatisfied might withdraw its grant and the whole scheme collapse. In 1908, however, Parliament passed the Education (Scotland) Act, under which the Residue Grants previously paid to the Counties were paid into one fund, known as the "Education (Scotland) Fund," distributed by the Department, and Agricultural Education has greatly benefited by the "pooling" of the funds. The grants made from this Fund are practically regarded as local grants and the management of the Colleges is left in the hands of representatives of County Councils as before. At the same time there is the advantage that no county can withdraw.

Sir John Struthers then described the policy underlying the changes above referred to. The aim of the Department has been to make the agricultural education of each province one and indivisible, and, instead of each county undertaking its own work, each county has representatives on the governing body of the central institution. The Central College is supposed to provide all local extension work, including experiments and demonstrations, just as if the County were doing the work itself, and by placing this work under highly skilled supervision at the centre there has been avoidance of waste. At first there were many difficulties to encounter, but the system is now unanimously approved. In reply to questions the witness said that the County Councils *qua* County Councils had nothing to do with the appointment or supervision of the staff, which worked under the Governing Body on which each County Council was represented. The local county staff worked under a local committee constituted by the College and reporting to the College. Each county had at least one local instructor assisted by special instructors for such subjects as poultry keeping and dairying. These local instructors were paid by the College. There were in Scotland no institutions of the nature of the farm schools proposed to be established in England and Wales. Speaking for himself, Sir John said that he was in favour of establishing "a centre of operations" for the county staff but there was no pressing need for establishing farm schools.

Sir John Struthers then gave a brief outline of the Scottish system of education. There are, he said, school boards elected *ad hoc* for each parish to deal with all forms of education, elementary, secondary and technical, in its district, but as it is obvious that rural boards cannot do very much for secondary education a Secondary Education Committee for each county is elected by the school boards of the county to look after secondary education as a whole. Neither of these bodies has anything to do directly with agricultural education. It is the function of the Department to co-ordinate their work with that of the Agricultural Colleges. For example, lists of School Gardens are sent to the Colleges, the gardens are inspected by members of the college staff, who forward their reports to the Department through the District Inspector.

Sir John Struthers said that they had been careful to impress upon the Colleges that their main business was to provide farmers with advice and assistance. At first there was a tendency to provide a course of instruction for a few students and to take no interest in the surrounding districts. Now it is generally recognised that the extension work in the counties is as important as, if not more important than, the central classes. The Department's aim has been to place both the central classes and the extension work under a representative body of governors and then to give them a very free hand to develop their work. The result is that the work of each of the Colleges is developing in genuine response to the needs of the district. The Department has urged uniformity in certain respects, *e.g.*, the courses for the College Diploma, but marked differences are to be observed in the schemes of extension work.

The Colleges are not connected by means of a Joint Committee; an attempt was made in this direction but failed. The Department occasionally calls a joint

meeting to discuss particular questions. The Board of Governors consists usually of about 30 or 40 members, many of whom are farmers. The actual work is carried out to a large extent by sub-committees together with the county committees already mentioned. All the administrative work is undertaken by the College.

In reply to supplementary questions Sir John explained that the Colleges at present have not farms attached to them, but they hoped to acquire farms with the help of the Development Fund. He was opposed to setting up further centres. Farmers write largely to the Colleges and receive replies either by letter or by a personal visit from a member of the staff. This branch of the work is a growing success. Very few of the students go to the College to learn farming—most of them have come from farms. The three Agricultural Colleges whose work he had been describing are three of a number of “Central Institutions” for the purposes of the Education (Scotland) Act, 1908.

NOTE.—By the original scheme formulated by the Scotch Education Department in 1899 the West of Scotland Agricultural College was placed under the management of a body constituted as follows:—

- (a) One Representative of each Town or County Council contributing annually £50 or such smaller sum as may from time to time be determined, with an additional Representative for every £100 contributed.
- (b) Five Representatives of the Glasgow and West of Scotland Technical College, and Three Representatives elected for life by the Governors of the Kilmarnock Dairy School, the entire management of which was transferred to the new Governing Body.
- (c) Two Representatives of Glasgow University.
- (d) Two Representatives of the Highland and Agricultural Society.
- (e) Four Additional Members to be elected by the foregoing.

In consequence of the passing of the Education (Scotland) Act, 1908, a change in the constitution of the Board of Governors became necessary, and the scheme was amended as under:—

“The Governors of the College shall be composed and elected as follows:—

- “(a) Representatives of the following Town and County Councils and Committees in the proportions herein referred to, nominated by said Councils and Committees to act as Governor or Governors on their behalf for such period, being not less than one year and not exceeding three years, as such Councils and Committees may determine:—

The Town Council of Glasgow	...	...	...	...	Two
The Town Council of Kilmarnock	...	...	...	...	One
The County Council of Argyll	...	...	...	...	One
The Secondary Education Committee of Argyllshire	...	...	...	...	One
The County Council of Ayr	...	...	...	...	Three
The Secondary Education Committee of Ayrshire	...	...	...	...	Three
The County Council of Bute	...	...	...	...	One
The County Council of Dumfries	...	...	...	...	One
The Secondary Education Committee of Dumfriesshire	...	...	...	...	One
The County Council of Dumbarton	...	...	...	...	One
The Secondary Education Committee of Dumbartonshire	...	...	...	...	One
The County Council of Kirkcudbright	...	...	...	...	One
The Secondary Education Committee of Kirkcudbrightshire	...	...	...	...	One
The County Council of Lanark	...	...	...	...	Three
The Secondary Education Committee of Lanarkshire	...	...	...	...	Three
The County Council of Perth	...	...	...	...	One
The County Council of Renfrew	...	...	...	...	One
The Secondary Education Committee of Renfrewshire	...	...	...	...	One
The County Council of Stirling	...	...	...	...	One
The Secondary Education Committee of Stirlingshire	...	...	...	...	One
The County Council of Wigtown	...	...	...	...	One

- “(b) Five representatives from the Glasgow and West of Scotland Technical College, nominated by said College to act as Governor or Governors on their behalf, and who shall hold office for three years from the date of election, and in the case of all elections subsequent to the first, for a period of three years from and after the expiry of the term of office of their predecessors.
- “(c) William H. Ralston, Dunragit, Wigtownshire, and Joseph Harling Turner, Cessnock, Galston, nominated by the Kilmarnock Dairy School, who shall be Governors for life, if, and so long as they consent to act.
- “(d) Two representatives nominated by the Highland and Agricultural Society to act as Governors, who shall hold office for one year, or for such period not exceeding three years, as the said Society may determine.
- “(e) One representative of the Court of the University of Glasgow and one representative of the Senate of said University, who shall hold office for three years from the date of election, and, in case of all elections subsequent to the first, for a period of three years from and after the expiry of the term of office of their predecessors.
- “(f) Four representatives to be elected by the Governors appointed as aforesaid, who shall hold office for three years from the date of election, and, in the case of all elections subsequent to the first, for a period of three years from and after the expiry of the term of office of their predecessors.”

APPENDIX II.

PARTICULARS OF THE ORGANISATION SET UP BY THE UNIVERSITY OF LEEDS AND THE COUNTY COUNCILS OF THE EAST, NORTH AND WEST RIDINGS OF YORKSHIRE, FOR THE FURTHERANCE OF AGRICULTURAL EDUCATION IN THE COUNTY.

(Supplied by Mr. John Bickersteth, Secretary to the Education Committee of the East Riding of Yorkshire and Joint Clerk to the Yorkshire Council for Agricultural Education.)

The County Councils of the three Ridings of Yorkshire, shortly after the passing of the Technical Instruction Act of 1889, proceeded to make some provision for Instruction in Agriculture, but for the purpose of this note it is not necessary to go back further than the year 1898, when the County Councils of the East and West Ridings, joined at a later date by the North Riding, constituted a Joint Committee under the provisions of the Local Government Act, 1888, for the purpose of promoting Agricultural Education and Research.

The Joint body consists of 36 representative members (of whom 12 are appointed by the County Council of each Riding) and 12 co-opted members. The members include persons of experience in all grades of general and technical education, a number of practical farmers and well-known Yorkshire agriculturists, several members of the Council of the Yorkshire Agricultural Society, persons who have specialized in various branches of Agriculture, Horticulture, Poultry Keeping, &c., and members of the Council of the University, care being taken that every desirable element is included in the composition of the Council.

The Joint body became at a later date the subject of a "scheme" under the Education Act of 1902, and is known by the title of "The Yorkshire Council for Agricultural Education"; it has (within the limits of its delegation) the powers of a County Council, and since its establishment has been responsible for agricultural teaching of all kinds in Yorkshire, with the exception of certain special work which it was more convenient for the North Riding County Council to deal with separately.

From the outset a considerable amount of work was carried out through the agency of the University of Leeds, and with the object of avoiding any possibility of overlapping or friction the University of Leeds found it desirable to regard the Joint Council as its Agricultural Committee for the management and conduct of the Agricultural Department of the University.

It is important to note that the members of the Joint Council have therefore acted in two quite separate and distinct capacities, viz. :—

1. As a County Council, in respect of work carried out or controlled by them without reference to the Governing Body of the University.

The most important matter dealt with in this capacity is the management of the Manor Farm, Garforth. The accounts in respect of this establishment, apart from the salaries of the teaching staff, are kept separately, and all payments are made direct by the Joint Council. These accounts are subject to Government Audit as being the accounts of a County Council.

2. As a Standing Committee of the University, in respect of University matters.

In this capacity the Joint Council approve annually of the Schemes of Work and Estimates of Expenditure, and also of all staff appointments and salaries. In view of this the Joint Council undertook to be responsible for the annual deficit on the working of the Agricultural Department of the University. The accounts of the Department, including the cost of the whole of teaching staff, are examined and checked on behalf of the Joint Council, and the net amount due as deficit each year is paid by the Joint Council as a "Grant in Aid."

The Joint Committee have from time to time appointed Sub-Committees for various purposes, and amongst these have been :—

A Sub-Committee for carrying on the Manor Farm, Garforth, and the Educational Institution there established ;

- A Sub-Committee for administrative purposes which has dealt, *inter alia*, with all matters affecting University work ;
- A Sub-Committee for considering applications for the Award and Renewal of Scholarships and Exhibitions.

In practice, the Education Committees of the three County Councils have found it convenient to ask the Joint Council to consider and report upon these applications, and as a rule the applicants appear in person before this Sub-Committee ;

- A Sub-Committee for Accounts ; and

Such other Sub-Committees as found necessary for special purposes.

The ordinary meetings of the Joint Council are held quarterly—The Farm Sub-Committee meet monthly at the farm—the other Sub-Committees meet as and when required. Meetings other than those of the Farm Sub-Committee are usually held at Leeds, as being the most convenient centre for the county as a whole.

The Joint Council erected educational buildings and a dairy school upon land adjoining the Manor Farm, Garforth, and laid out substantial sums in additional buildings, Dutch barns, &c., and in the improvement of the then existing farm buildings, and the total of such capital expenditure has been close upon £10,000, towards which no grant has so far been received from any central authority.

Although the Manor Farm, Garforth, has thus been carried on directly by the Joint Council and not as part of the University, it has been available for the use of the University staff and students for demonstration purposes, and in recognition of this the Board of Agriculture has made a grant of £200 per annum on account of the farm.

The policy of the three County Councils all through has been to secure that the whole of the agricultural work of the county shall be under the supervision and direction of the most highly qualified person obtainable, who must of necessity be the Head of the Agricultural Department attached to the University and so have at his disposal a highly qualified staff, including those engaged in work in the county as well as those in the University.

It has always been laid down by the Joint Council that the Head of the Agricultural Department shall possess an intimate acquaintance with agriculture as well as high educational attainments.

The expenditure of the Council is the subject of apportionment at the end of each year. In all matters such as County Lectures, Educational Gardens, Demonstration Plots, &c., the actual cost is ascertained as nearly as possible and debited to each Riding. In this way each county pays for what it gets. After bringing into account such items, the remaining deficit, including the expenditure on all work carried out by the three Ridings in common, is divided in the proportion of 25 per cent. East Riding, 30 per cent. North Riding, and 45 per cent. West Riding. The percentages were fixed by agreement at the outset, after taking into account matters such as population, rateable value, and the extent of the agricultural interest in each area.

The meetings of the Council and Committees are well attended.

The monthly meetings of the Farm Sub-Committee, which is mainly composed of men actually engaged in farming, brings the Committee and Council into touch with the whole of the county. The professor and his assistants are constantly consulted by both large and small farmers.

APPENDIX III.

CO-ORDINATION OF THE WORK AT NEWTON RIGG FARM SCHOOL FOR THE COUNTIES OF CUMBERLAND AND WESTMORLAND WITH ARMSTRONG COLLEGE, NEWCASTLE-UPON-TYNE.

(Supplied by Professor D. A. Gilchrist, M.Sc., Professor of Agriculture and Rural Economy, Armstrong College, and Mr. C. Courtenay Hodgson, M.A., Secretary to the Cumberland Education Committee.)

1. The field experiments carried out on various farms in Cumberland for the past twenty years have been planned by, and are under the direction of, the Professor of Agriculture, Armstrong College, and a payment has been annually made to the College for this work and for the supply of the necessary artificial manures. The manager of the Farm School has had the local supervision of the experiments and has seen to the application of the manures, the weighing of the crops, &c.

2. Similarly, field experiments have been carried out on various farms in the County of Westmorland since 1906, which are under the direction of the Professor of Agriculture, Armstrong College. Lectures on the results of these experiments are given in the County, and a payment is made annually to the College for this work.

3. Experiments are carried out on feeding rations for milch cows and on variations in the composition of milk at Newton Rigg Farm School, when required by the Professor of Agriculture, Armstrong College.

4. The Professor of Agriculture of Armstrong College is the Examiner of the classes of dairy pupils held during the summer, and of the class of farmers' sons held during the winter at Newton Rigg.

5. Leaving Scholarships granted by the County Councils of Cumberland and Westmorland to Newton Rigg pupils are tenable at Armstrong College only.

6. The Instructor in Horticulture for the Counties of Cumberland and Westmorland is appointed and paid by Armstrong College, but he is entirely under the direction of the Agricultural Sub-Committee of the two County Councils, who are responsible to Armstrong College for his salary and expenses.

7. The Six Weeks' Course of Instruction in Forestry conducted at Armstrong College, and a further course of instruction in Chopwell Woods, County Durham, have been attended by pupils from Cumberland during this and last winter. The Counties of Cumberland and Westmorland both offer exhibitions for this six weeks' course, but no candidate from Westmorland has yet availed himself of the offer. There is every likelihood that these exhibitions will be more fully taken advantage of in the future.

8. The Lecturer in Forestry of Armstrong College gives lectures when required on subjects connected with Forestry in the Counties of Cumberland and Westmorland, and visits estate and other woodlands in the two counties to give advice on their management. An inquiry has also been made on the Large Larch Sawfly, while work is also done in connection with other forest pests in the two counties.

9. The Lecturer in Agricultural Chemistry of Armstrong College makes the necessary analyses of manures, &c., in connection with the field experiments, and of the foods used in the feeding experiments, as well as of crops grown when necessary.

10. The courses of instruction at Newton Rigg as a Farm Institute, the management of the farm and school, the appointment, payment and control of its staff, are quite independent of Armstrong College, and are under a joint Committee of the Education Committees of the two County Councils.

11. The Newton Rigg staff give lectures on agriculture and poultry keeping, as well as instruction in dairying, in the two counties.

APPENDIX IV.

MEMORANDA ON THE CO-ORDINATION OF THE WORK OF THE FARM SCHOOL AT BASING, HANTS, WITH UNIVERSITY COLLEGE, READING.

I.

(Supplied by Mr. R. Hart Synnot, D.S.O., B.Sc., Director of the Department of Agriculture and Horticulture, University College, Reading.)

The College staff examine the Farm School students once a year, and select the two most promising boys, to whom the Hants County Council awards scholarships to enable them to attend a six months' course in agriculture at this College, at the end of their Basing training.

The manager of the Farm School usually brings his boys to visit the College once a year, and he puts Hants farmers into communication with members of the College staff periodically when they ask advice which the Farm School staff cannot themselves provide.

It would be desirable if representatives of this College could be on the Farm School Committee, and if the Manager of the Farm School could be on the Farm Committee of this College. Also considerably closer co-operation should exist between the two staffs as regards advisory work in Hampshire. If that were arranged, Hampshire farmers would be able to make far more use than they do at present of the advisory facilities of the College, while the Farm Institute staff would be relieved of a good deal of advisory work, for much of which they have no member of staff specially qualified.

As regards courses of instruction, the training given to boys at Basing gives excellent results, and some of the best students in the Agricultural Department of the College have been through the Farm School course. The defect of the present system is that so few boys come on to the College from Basing in addition to those who obtain scholarships from the Hants County Council.

Basing represents a good type of Farm Institute, and with very little modification could be made to fulfil all that is required of the Farm Institutes now in contemplation. What is wanted, however, is that the Farm Institute and County work in Hampshire should be organised with this College as part of a single system, instead of having, as at present, two almost distinct organisations. There seems every prospect of such an arrangement being made in the near future.

II.

(Supplied by Mr. D. T. Cowan, M.A., Director of Education, County of Southampton.)

The financial relations between the Education Committee and the College authorities are as follows :—

The County Council in the year 1897 gave a capital grant of £1,000 to Reading College, and in 1908 decided to give an annual grant of £150.

For the capital grant of £1,000 the Council had the right to send three scholars to the University to receive gratuitous instruction. The annual grant necessitated a fresh agreement with the College, and the following terms were then settled :—

- (1) The three scholars sent to Reading under the 1897 agreement shall continue to receive gratuitous instruction.
- (2) Other scholars, for whom tuition fees are paid by the County Council, shall be paid for as heretofore less a reduction of 25 per cent. in each case, which reduction shall be made by the College in recognition of the Grant in Aid.
- (3) A reduction of 25 per cent. shall be made in the composition fees charged for tuition to matriculated Hampshire students taking full courses of study either in the day or in the evening classes. (This reduction does not apply to Day Training Students.)

- (4) The County Council shall have the right of appointing two Governors of the College, one of whom shall have a seat upon the College Council.
- (5) The Department of Agriculture and Horticulture at Reading shall aid the agricultural education of the county by advice, inspection, &c., and in such other ways as may from time to time be determined.

It is interesting to note in connection with the agricultural scholarships tenable at Reading College that there was no demand for them at all until the Farm School was made the link between the farmer and the University College. The advertisement for open scholarships called forth no response, but as soon as a scholarship system was inaugurated under which sons of small farmers could obtain access to the Farm School, and from the latter to the University College, there was created quite a keen competition for the higher agricultural scholarships.

The question of the control of the agricultural work has recently been under consideration, and a scheme adopted for bringing the whole of the Agricultural Associations of the County into immediate connection with the work. A copy of the scheme is attached.* One effect of this has been that there has been awakened among the members of the Associations a demand for Market Day Lectures on subjects bearing on agriculture, and at the last meeting of the Agricultural Sub-Committee it was decided that the staff of the Director of Education be increased by the addition of a Lecturer on agricultural subjects, whose time shall be devoted partly to the Farm School and partly to lecturing to farmers on market days. The Committee in question represents practically every part of the County, and consists at present of the Chairman of the County Council, Chairman of the Education Committee, Chairman of the Education Finance Sub-Committee, two other members with special knowledge of finance, six practical farmers, four landowners, and three land agents.

It is necessary to mention that it is the intention of the Education Committee to purchase a farm near Winchester so that the soil may be more typical than at Basing of the central land of Hampshire, and also for the purpose of simplifying organisation and eliminating from the teaching staff a good deal of clerical work which at present falls upon them, and which could be done from the Central Office were the School nearer Winchester.

The Agricultural Committee have now referred to them all questions relating to agricultural education; they have separate estimates prepared, and may spend up to these estimates when passed by the Education Committee. But seeing how much of the work has to be organised in connection with the evening school movement it is essential that the Agricultural Education Committee in this regard works in close harmony with the Higher Education Committee, nor would it be desirable for them to be out of touch with the work of the Elementary Education Committee with so much activity going on in the matter of school gardens and other rural subjects. In Higher Education, for example, all the Horticultural Lectures, Farriery Instruction and Travelling Dairy School is linked up with the evening school movement, and the Evening School Gardens under the Agricultural Sub-Committee are of course an essential part of the evening school horticultural work, so that it is impossible to have water-tight compartments, and impossible as well as undesirable to disassociate some of the agricultural work from the evening school work. Again, in dealing with the award of horticultural exhibitions the machinery of the evening schools is brought into play. And, further, in the award of agricultural scholarships there comes into play the general organisation of the award of scholarships.

The Agricultural Sub-Committee have discussed at various times the connection of the Farm School and the general agricultural work of the County with the University College, Reading, and although there has been no new resolution passed thereon, there have been considerable expressions of opinion against any attempt on the part of the College authority to largely control the work of this County to the extent apparently aimed at in Mr. Hart Synnot's paper read to the educational section of the British Association at Portsmouth, in which he appears to put forward the plea for directing all agricultural educational activities from Reading College and for controlling in a more or less degree the various County staffs concerned in carrying out that work locally.

While the Committee are deeply sympathetic with the desire to see the link strengthened between the County work and the College, they are of opinion that

* Not printed.

in a County of the size of Hampshire it is essential that the organisation shall be complete in itself, and that any attempt to centralise out of the County what are essentially local concerns would not be for the good of the work, and might even destroy interest that has been created. The existing link might very well be strengthened in the following directions: by the College having on the Agricultural Department side a body of highly capable experts whose services might be available when required for special and higher work in the County that could not so well be undertaken by the County staff, whose activities are naturally on a lower plane and deal with the more practical side of agricultural education; by seeking the help and guidance of the College staff on the question of diseases of plants and animals that may arise from time to time in the course of the work; by advice on important questions of manures and analyses of soils, and in consulting them on the subject of agricultural experiments at the Farm School and elsewhere so that some of the work in this direction in the County might have a distinct bearing, and help to throw light, on that done of a similar character in other Counties, and in this way form part of a larger whole. But in the matter of Horticultural Lectures, the Travelling Farriery School, Travelling Dairy School, and the major portion of the work at the Farm School, and all that might be described as distinctly practical local work, the present lines followed by the Committee are both effective and satisfying.

There has been no point in the discussions which have taken place more emphasised than the need for maintaining the supervision of local authorities over the agricultural work and the staffs employed within their respective areas. In the view of the Committee it lies at the basis of effective control and is essential to the sustaining of local interest where rates and County funds are involved.

No part of the financial aspect of the subject has been discussed by the Committee.

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

SEVENTH REPORT
OF THE
RURAL EDUCATION CONFERENCE.

MANUAL INSTRUCTION IN RURAL
ELEMENTARY SCHOOLS
AND THE
INDIVIDUAL EXAMINATION OF CHILDREN
IN RURAL ELEMENTARY SCHOOLS.

Presented to both Houses of Parliament by Command of His Majesty.



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1913.

This Report was prepared by the Rural Education Conference, which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June 1910 (H.C. 63, 1910).

The following is a list of the earlier Reports of the Conference, copies of which may be purchased, either directly or through any Bookseller, from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C. :—

No. 1.—County Staffs of Instructors in Agricultural Subjects, 1910, price 1*d.*, with postage 1½*d.*

No. 2.—Qualifications of Teachers of Rural Subjects [Cd. 5773], 1911, price 2½*d.*, with postage 3½*d.*

No. 3.—Suggested Type of Agricultural School [Cd. 5774], 1911, price 3*d.*, with postage 4*d.*

No. 4.—Consolidation of Rural Elementary Schools [Cd. 6055], 1912, price 2*d.*, with postage 2½*d.*

No. 5.—Courses in Agricultural Colleges [Cd. 6151], 1912, price 3*d.*, with postage 4*d.*

No. 6.—Co-ordination of Agricultural Education [Cd. 6273], 1912, price 2½*d.*, with postage 3*d.*

Report on Mr. Bellwood's Motion.

1. The Conference have had under consideration the following motion, which was made by Mr. Bellwood at the request of the National Farmers' Union :—

“That this Conference should consider—

- (a) the possibility and advisability of introducing Manual Instruction throughout the whole of a child's School life into the Rural Elementary Schools as a new method of teaching rather than as a new subject;
- (b) whether a system of periodic, independent, individual Examination of children in Rural Elementary Schools should be initiated.”

2. The Committee, presided over by Mr. A. W. Chapman, by which the detailed consideration of the motion was undertaken, held five meetings and interviewed the witnesses set out in Appendix I. The bulk of the evidence related to the first part of the reference, but the majority of the witnesses answered questions with regard to the second part also.

3. With regard to the first part of the reference, from the information placed at our disposal it would appear that manual instruction as a new subject has been introduced into a very large number of rural schools by County Education Authorities. By the term “manual instruction” we mean classes in such subjects as cookery, laundrywork, housewifery, dairywork and gardening, for girls; and gardening, handicraft and light woodwork, for boys.

In this connection a table (*see* Appendix IV.) has been prepared from various figures given in the Board of Education's volume of Statistics for 1910–11 (Cd. 6338), which is designed to show the extent to which this has been done in each county in England and Wales.

It will be seen from the table that the provision made by the different counties varies considerably, and it is to be noticed that while a few counties have aimed at securing such instruction for the children in a considerable proportion of their schools, in more than one-third of the counties the provision is quite inadequate.

There are, however, so far as we have been able to discover, no data upon which to base any reliable calculation as to the actual number of schools in rural districts in which manual instruction has been introduced as a new method of teaching as distinguished from a new subject. From the information which we have been able to gather we think it is safe to say that whilst it has already been introduced into a considerable number of schools under varying conditions, yet in the great bulk of the rural schools of the country very little if anything has been done in this direction.

It is clear, in our opinion, that, as stated in the report of the Board of Education for the year 1910–11, a great impetus has been given to the study of educational handicrafts by the “Memorandum on Manual Instruction in Public Elementary Schools, 1910,” and this impetus has been increased by the “Memorandum on the Principles and Methods of Rural Education, 1911,” with the result that, as stated in the Board's Annual Report for 1910–11 :—

“Handwork as a subject or as a method appears now to be formally established as “an integral part of the curriculum in large numbers of schools.”

In a few counties a good deal has been done at considerable expense. For example, in Surrey, which has a high rateable value, manual instruction for children over 11 has been introduced as a new method of teaching as well as a new subject into a great number of the schools under conditions of a very favourable character, and efforts are being made to bridge over the gap between the manual work done by children in the infants' department and that done by children of 11 years of age and upwards.

In some other counties a certain amount has been accomplished without the expenditure of much money, *e.g.*, in the Lindsey division of Lincolnshire and elsewhere, successful experiments have been made in this direction in a certain number of schools at very little cost.*

Whilst, therefore, it is impossible to say that, taking the country as a whole, this new method of teaching has yet been adopted in more than a small proportion of the schools, as the majority of teachers have had but little experience of its possibilities, there are, on the other hand, very encouraging signs that the question is receiving the attention and consideration of many of those who hitherto have taken no action whatever in this direction.

* NOTE.—*See* App. II. (d).

4. All the evidence that we have received has tended to prove beyond doubt that where this method of instruction has been introduced into the rural schools by capable teachers who are in sympathy with it the result has been entirely beneficial. The children have acquired more initiative, have been able to express themselves more readily, and have shown increasing interest and intelligence in their work. The ordinary subjects taught have been more real to the children, and as a consequence the lessons have been more lasting owing to the fact that things in which they were interested in their daily life have been used as a means of teaching them. The development of the children's faculties has been helped by the fact that they have been given work to do which they have recognised as definitely useful, with the result that they have become more adaptable for their work in after life. Several of our witnesses have laid stress upon the success with which the method has been employed in teaching children who have hitherto been considered to be dull or backward. The parents too have welcomed the method employed, and have become more interested in what their children have been taught.

5. On the other hand, it would be impossible not to recognise from the evidence laid before us that the possibilities of introducing manual instruction to any great extent as a method of teaching throughout the whole of a child's school life in rural schools are limited by several factors.

All the witnesses agreed in stating that the success of this method of teaching depends primarily upon the teacher, and several of them were emphatic in their belief that the method would be worse than useless if it were attempted by teachers who were not properly qualified. It was impressed upon us that it was possible for a skilled teacher to correlate almost all the manual work with the ordinary subjects and to use it as a way of teaching those subjects more effectively. In order to do this, however, considerable inventive power and resource were required from the teacher, and the higher qualities and greater skill that were essential made it necessary that such teachers should be carefully selected and trained.

It is true that considerable progress has already been made by the aid of classes for teachers, and we have had evidence to show that such classes have already borne remarkable fruit in giving those teachers who are keen and interested the opportunity of acquiring the right ideas on the subject. But it must be a considerable time before suitable teachers can be trained in any large numbers, and in view of the progress already referred to we feel that it is incumbent upon the Local Education Authorities to make further efforts in this direction.

6. Our witnesses too have impressed upon us the possibility of Local Education Authorities and Managers of voluntary schools being obliged to incur increased expenditure for providing special accommodation.

It is obvious that the provision of specially equipped rooms for each of the rural schools would be an obstacle which few rural Authorities would be prepared to face. In some of the richer counties such rooms have in fact been built or centres provided which could be attended by children from a group of schools, but both the provision and maintenance of such rooms and centres have involved a considerable expense.

We are aware that some counties where the method has been introduced experimentally, such as the Lindsey division of Lincolnshire, a great deal has been done by using the actual schoolrooms even for Laundrywork and Carpentry. While it is clear that much valuable work may be accomplished in this manner, and it is hoped that many Authorities will follow this example, it is scarcely to be expected that the majority of them will rest contented with such incomplete facilities when once they have realized the value of this new method of teaching.

In no circumstances, however, should it be accepted as an excuse for the absence of such teaching that special buildings and complete equipment have not been supplied.

7. The additional expense thrown upon Local Authorities will not only be caused by the provision of special accommodation, but also by the necessity for employing a larger number of teachers. We have had evidence to show that where the method is really successful, the teaching is more individual than is at present usual in elementary schools, and must ultimately involve smaller classes.

8. Whilst, therefore, we believe that it is highly desirable that every effort should be made to introduce manual instruction as a method of teaching into the rural schools, we are of the opinion that it would be impossible to introduce it on a large

scale until a suitable number of teachers trained in the new methods are forthcoming, or if it involved the Local Education Authorities in the expenditure of much money. We think that any attempt to do anything of the kind would probably bring discredit on the movement. We feel strongly, however, that much may be and should be done in the immediate future to introduce it gradually by encouraging Local Education Authorities to make use of their most capable and enthusiastic teachers, and by inducing them to be wise enough to be content, in the first place, to follow the example set by Lincolnshire and other counties in making the best use of limited accommodation and equipment.

9. We recommend accordingly that—

- (1) County Education Authorities should do all they can to encourage the gradual introduction of the manual method of teaching into rural elementary schools—
 - (a) by obtaining and spreading information as to the best examples that are to be found in various parts of the country ;
 - (b) by giving every encouragement and freedom to capable teachers who are willing to try the method ;
 - (c) by providing classes for the training of teachers for this special purpose, or by giving facilities to teachers to attend such classes as already exist.*
- (2) Too much importance should not be attached in the first instance to the provision of special accommodation and equipment for this particular method of teaching.
- (3) In view of the national importance of the matter the Board of Education should use its best endeavours to encourage Local Authorities to promote the extension of this system, and that increased grants should be provided from the Exchequer to encourage Local Authorities to incur the expense of the necessary equipment and of employing a larger number of suitable teachers. This is especially necessary in the case of rural districts with a scattered population and a low rateable value.

10. With regard to the second part of the reference, we recognise that the abolition of the old system of examination has led, in some areas, to slackness on the part of some teachers and the consequent lowering of the standard of teaching in certain schools.

While we find ourselves quite unable to recommend the reintroduction of the old system of examinations, we recognise the drawbacks incidental to the discontinuance of adequate means of testing the individual capacity of the children, and we recommend that the Board of Education should consider the advisability of making some attempt to overcome the disadvantages of this situation.

In the meantime we suggest that the inspection by the Board of Education might be more complete, and that the results of such inspections might be more systematically and freely communicated to the Local Education Authorities. We also suggest that the informal examination by Inspectors which usually forms part of an ordinary inspection should play a more important part than it does at present.

We consider that teachers should be expected to form their own opinion of the capabilities of the children committed to their care, and that the system in vogue in some schools of keeping parents informed of the progress their children are making, by the issue of periodical reports upon individual children, should be encouraged.

(Signed) HENRY HOBHOUSE,
Chairman.

5th December 1912.

* NOTE.—This report deals only with existing teachers as the question of the future training of teachers for rural schools has already been considered in the Report of the Conference on the Qualifications of Teachers of Rural Subjects (Cd. 5773).

APPENDIX I.

LIST OF WITNESSES.

The following witnesses were interviewed by the Committee:—

- | | |
|--------------------------|--|
| 1. Mr. Ramsay Nares | Clerk to the Surrey Education Committee. |
| 2. Mr. J. Perkins - | Headmaster of the Boys' Department of Raynes Park School, Surrey. |
| 3. Miss Tomes - - - | Headmistress of Mortlake Girls' School. |
| 4. Mr. W. Birkett | Inspector of Elementary Education to the Lindsey Education Committee. |
| 5. Mr. Rayner | Headmaster of Hibaldstow School, Lincolnshire. |
| 6. Mr. Shirley - | Assistant Secretary to the Education Committee for Berkshire. |
| 7. Mr. E. G. A. Holmes - | Formerly Chief Inspector of Elementary Schools under the Board of Education. |
| 8. Mr. Durrant | Headmaster of the National School at Kilham, Driffield, Yorkshire. |
| 9. Mr. Meadon - - - | Assistant Secretary to the Oxfordshire Education Committee. |
| 10. Mr. A. Holmes - | Headmaster of South Kelsey School, Lincoln. |
| 11. Mr. C. Elliot - - | Headmaster of the Grammar School, Ashby-de-la-Zouch. |
| 12. Mr. T. Johnson - | An Inspector under the Board of Education. |

APPENDIX II.

SUMMARIES OF EVIDENCE.

(a) Mr. Ramsay Nares.

Mr. Nares was Secretary to the Surrey Education Committee from 1903 to 1909, and is now Vice-Clerk of the County Council and Clerk of the Education Committee.

Mr. Nares gave the figures set out in Tables I. and II., showing the growth in the number of schools in which manual subjects are taught to children over 11, and in the number of children receiving such instruction. This instruction in Surrey is chiefly carried on in special buildings. There are, however, a few cases in which the Board of Education have approved a room attached to a village hall for the instruction. The special subjects buildings are attached to those existing schools or new schools which form a convenient centre for surrounding small schools from which a sufficient number of eligible students can be sent so that, with those from the school itself, the Special Subjects Centre can be utilised both morning and afternoon of every school day. In this way every eligible boy or girl has or, when the system completely covers the whole area, will have the opportunity of obtaining some form of manual instruction which cannot be provided in every one of the isolated small schools of the county.

The number of children in Elementary Schools in Surrey eligible to receive special subjects instruction is 294·7 per 1,000 in attendance, and the number of class entries in special subjects classes in Surrey in 1909-10 was 204·5 per 1,000 as compared with 80·3 for all county authorities (excluding London).

In all the new Central Schools built in Surrey provision is made above the central halls for instruction in special manual subjects; this instruction is given by special teachers in almost every case; the reason for this is that the ordinary teachers have, as a rule, no qualifications for undertaking this work.

The cost of a full Special Subjects Centre is from 1,200*l.* to 1,500*l.*

The estimates for 1912-13 for the annual maintenance (including loan charges) of Special Subjects Centres is 11,000*l.* In 1902-3 it was 1,000*l.* The average cost per whole number of children in the Elementary Schools is 2*s.* 8*d.*, and per child instructed is 9*s.* 5½*d.*

The manual instruction referred to is provided for those children who are over 11 years of age, but the county are now endeavouring to bridge over the gap between the manual work done by children in the infant departments and the special subjects teaching which is given to children of 11 years of age and upwards. This is being done by providing instruction in Cardboard Modelling, Paper-cutting, and the like. Sometimes a kindergarten teacher is transferred with a batch of promoted infants to Standard I. and carries on with some improvements and modifications the work undertaken in the infants' class. Sometimes the ordinary teachers are able to give this form of instruction as a result of some special training which they have acquired. Mr. Nares considered that the results had been most beneficial; children who seemed devoid of all intelligence in ordinary elementary subjects had developed in mental alertness and in constructive power, and in his opinion it was, as a method of education, properly applied, of the greatest educational benefit and a great advance had been made lately. If these methods of instruction were to be a success it was quite

clear that it would be necessary to have (a) sympathy, strong individuality and proper handling of the subject on the part of the teacher, and (b) small classes of not more than 30 to 35.

Mr. Nares emphasised the fact that the work was intended to be educational, and quoted from the Education Committee's Handbook certain instructions to teachers, pointing out that manual instruction was not intended to turn out carpenters, gardeners, cooks, &c.

With regard to the co-ordination of subjects taught in the Special Subjects Centres, Mr. Nares said that children who learnt Cookery were taught how to cook a dinner, and were also required to calculate the cost of the materials used. They became acquainted with the current prices of materials and worked out the cost per head of the meals they cooked. This work formed the subject of an Arithmetic lesson which followed closely on the manual instruction which they had been given in the Centre.

In the same way in Gardening a profit and loss account was kept by each boy for his own plot. He ascertained the market prices as best he could, even by inquiring of his parents or gardeners. Thus the parents became interested in what the children were doing at school. The discussion on the accounts formed part of the Arithmetic lesson which followed the Gardening instruction.

Geography was taught to some extent by maps made by the children themselves in clay, sand, or other materials.

Mr. Nares laid stress on the point that the crux of the question was the teachers; it would be very expensive to provide throughout the County a large number of teachers with the special qualifications which were required, and in most cases it would be necessary to provide special accommodation. He was of opinion that it was not at present possible to give this form of teaching by ordinary teachers.

It was pointed out to Mr. Nares that while the Committee were agreed with regard to the value of the manual method of teaching they wished to get his views as to the practicability of extending it throughout the counties of England without undue expense. Mr. Nares was of opinion that instruction could be carried on in a modified way by developing Gardening and the simpler forms of handwork. He suggested, too, that the more elaborate manual instruction such as Carpentry and Cookery might be taken as a post-elementary course in the Evening Schools.

Table I.

SURREY EDUCATION COMMITTEE.

Special Subjects.

Number of Elementary Schools at which children over 11 are in attendance, 233.

Of these schools 72 are either urban or semi-urban with an attendance of such children of 10,078, and 161 rural with an attendance of such children of 8,912.

Fourteen urban and 36 rural schools each have a head mistress in sole charge.

At the present time children in attendance at the following Schools are receiving instruction in special subjects.

—	Cookery.	Domestic Laundry.	Housewifery.	Handicraft.	Gardening.
Rural	76	17	25	58	108
Urban or semi-urban	51	28	29	45	37
	127	45	54	103	145

May 1912.

Table II.

SURREY EDUCATION COMMITTEE.

Return showing the Growth of Special Subjects Instruction in the County of Surrey since the Year 1902-3.

Year.	Cookery.		Laundry.		Housewifery.		Combined Domestic Subjects.		Handicraft.		Gardening.	
	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.	No. of Schools whose Scholars received Instruction.	No. of Scholars who received Instruction.
1902-3	11	—	—	—	—	—	—	—	1	—	16	—
1905-6	50	1,800	—	—	—	—	—	—	15	450	62	996
1906-7	71	2,315	4	39	—	—	—	—	33	999	76	1,410
1907-8	79	2,913	10	318	—	—	—	—	53	1,527	88	1,721
1908-9	96	3,651	20	950	—	—	—	—	67	2,812	108	2,033
1909-10	104	4,108	31	1,382	12	214	2	20	75	3,386	125	2,294
1910-11	119	4,353	41	1,978	27	450	4	60	91	3,891	136	2,564
1911-12	127	6,050†	45	2,760†	54	2,084*	3	60	103	4,508*	145	2,644
1912-13	148*	—	—	—	—	—	—	—	124*	5,668*	—	—

* Estimated number.

† Class entries.

May 1912.

(b) Mr. J. Perkins.

Mr. Perkins has been Headmaster of the Boys' Department of the Raynes Park School, Surrey, for the last 2½ years, having been for three years Headmaster of the Temporary Mixed Department at Raynes Park, and for over five years in charge of the Farnham West Street Council School.

The school at Raynes Park is quite new, and a special building was erected in September, 1911, and equipped for Manual Instruction in wood and metal.

No special accommodation has been provided for the Handicraft instruction in the lower part of the school where work is done in plasticine, paper, cardboard, and similar light material in the ordinary rooms.

Mr. Perkins described the Handicraft method as being of great value both in conveying a correct *impression* of what the master desired to teach, and enabling a child to give an accurate *expression* of its conceptions and ideas.

By way of illustration he showed how very readily precise impressions might be implanted by the use of paper folding and cutting in its relation to Geometry and Arithmetic.

Suitable expression was often best secured in History, Scripture, Narratives, and Literature by means of Drawing and Modelling. The boys drew scenes which had been described to them or of which they had read; they also cut out paper to illustrate such scenes and made models in plasticine. Very often great originality was displayed by the boys. Modelling was often done on a co-operative principle, and the results of each boy's efforts were brought together and co-ordinated to make a suitable scene or group.

Mr. Perkins was of opinion that, while manipulative and constructional exercises would always be required, every effort should be made to avoid cramping the child's initiative. Consequently there should be a great deal of free play in the Handicraft work in the earlier stages, and it should be treated as a means to an end rather than as an end in itself.

As a boy progressed Mr. Perkins found that while Handicraft continued to be necessary as a method, it was desirable to give more and more opportunity for instruction definitely designed to develop skill in manipulation and construction. Manual Instruction courses in wood and metal were largely drafted with this object, but at the same time models to illustrate details of other School subjects were constructed where such appeared suitable and serviceable.

He maintained that when the Handicraft method had effected its object and fixed correct impressions in any particular point it should be discarded and the boy should be led to deal with the question in the abstract. He insisted that it was essential that the proper idea of handwork as a method should be appreciated, and its introduction was only justified in a particular case when most suitable and effective for the purpose in hand. Though he was a keen believer in this mode of teaching he was quite aware that it was easy to exaggerate its value and to disregard its suitability to particular circumstances.

He had no doubt that this method had led to increased interest and intelligence on the part of the boys. This was particularly noticeable in children who might be called sub-normal, but the average child also gained considerably by this kind of work.

In his judgment drill and grind and close application were still necessary. The idea behind the method was not to make school work, as a whole, easier for the boy, but to enable him to grasp the subject in hand more readily and accurately, and to make his progress more sure and rapid, and thus to make the best use of his time: difficulties were more easily surmounted, the boys did not so often lose heart, they gained confidence in themselves, became more self-reliant, and applied themselves more keenly, because they did not feel the work to be beyond their power and comprehension.

All the class teachers at Raynes Park were enthusiastic in this part of the work, and Mr. Perkins emphasised the fact that he was materially assisted by the special aptitude and knowledge of the masters in various directions. It was essential to the success of any method that the ideas and abilities of the staff should be put into common stock.

The Managers of the School had tried to get the type of man who would be interested in constructive work. In making appointments it was necessary to remember that whereas these methods cultivated inventiveness and resourcefulness in the child they *demand* inventiveness and resourcefulness from the teacher. Consequently the new education called for higher qualities and greater skill, and it was essential that every class should be taught by a well-qualified and carefully trained teacher. The chief qualifications in a teacher were personality and grit, and after that attainments.

The Handicraft method had not been used in its relation to impression and expression by any of the teachers before coming to Raynes Park, but he was convinced that those who were really keen became good exponents in a year. When once they caught the right idea they saw its effectiveness and would not go back entirely to the older methods.

Owing to the greater demands made upon the teacher, Mr. Perkins was of opinion that if it was to be successful the instruction must be made very much more individual. It was very difficult, therefore, in the simpler forms of Handwork for a teacher to undertake successfully more than 35 children, and this number could only be managed when the children closely approximated each other in attainment. In small schools, where the children in one class varied considerably in age and ability, the number should not exceed 20 to 25. In Woodwork and Metalwork, of course, a class of 20 was the maximum which could be taken with good results.

At Raynes Park the Boys' School at first was divided into seven classes of about 35 boys each, but owing to the growth of the district each of the classes now numbered 50 or more on the roll. He could see that the quality of the work had fallen back with the increase in the size of the classes, and the teacher's resources were often taxed to breaking point.

Mr. Perkins considered that in isolated rural schools it would be difficult for teachers to adopt the method without considerable assistance, because of the greater strain involved and the difficulty in the smaller schools of dealing with children of very varied capacity in one group. For this reason

he thought the only solution would be to have an itinerant teacher attached to a group of schools regularly visiting each to assist particularly in developing the use of the Handicraft method by the teacher and the cultivation of the manipulative sense in the child.

In rural schools he would make Gardening the centre of much of the school work. It was possible to associate it with Manual Instruction, Arithmetic, Science, Drawing, Modelling, and English Composition, and whenever such association was likely to be valuable and educative it should be developed.

He would not by this means give a rural bias to the teaching in the sense of preparing children to go on to the land, but would use the things with which they were familiar as illustrations in the school lessons, and thus interest them in their rural environment that there was at any rate no bias against country life. In his opinion a definite bias was only justified when a large proportion of the children were expected to enter the employment towards which the bias was directed, but in any case the bent should not be given until towards the end of the child's career.

After considerable experience Mr. Perkins was of opinion that the ordinary dual desks were not well adapted to any work except that which required the child to sit in one position, and he made the suggestion that, if Handicraft was to enter at all largely into the ordinary work of the school, there was some need of modifying the furniture and equipment ordinarily adopted. He suggested that some, at least, of the rooms should be fitted with suitable collapsible tables and chairs which could probably be provided at less cost.

With regard to the general effect of the introduction of motor exercises and of definite manual training, Mr. Perkins was convinced that it conduced to keener interest, increased intelligence, greater resourcefulness, self-reliance, and adaptability, but the Raynes Park School had not been established sufficiently long to justify him in drawing any conclusion as to the result upon the boy as a unit in the industrial world.

(c) Miss Tomes.

Miss Tomes has been for four years Headmistress of the Mortlake Girls' School. The Manual method of teaching was introduced three years ago from the bottom of the School to the top. Miss Tomes is of opinion that it has aroused the interest and improved the intelligence of the children, especially among those that are sub-normal. In the lower standards of the school children do clay modelling, make maps in sand, and take nature study according to the plants that are in season at the particular time. In the last subject the plan is that they should study the plant, model it in clay, and ask as many questions as they like about it. Throughout the school Needlework is taught as a very important subject, and the children learn to make things, beginning with cutting out even in the lowest standards, and correlate all their work by drawing patterns and measuring them according to scale.

An experiment is being tried by Miss Tomes as follows:—

When the girls reach 13, no matter what standard they are in, they are all drafted into a room together and the work takes a practical turn. Arithmetic is based on home life, cost of living, and calculation of wages. Housewifery is taught by cleaning, dusting, laying tables, &c. Every girl has by the time she has left school made herself a complete outfit and has learned how to use a sewing machine properly. The children are also taught to mend their own clothes and convert old clothes from one size to another. This class is called the Home-making Class.

In this class the "Care of Infants" receives careful attention. The girls are taught to wash and dress a baby and to cut out and make clothing for it on the latest hygienic principles. Home Nursing (which includes sick-room cookery) is also taught in order to enable the girls to know quickly what to do in cases of ordinary sickness, infection, or emergency until the doctor comes.

She was astonished at the result of this class, as after two or three months the girls showed much greater self-reliance and resourcefulness and were much more alert. Sometimes when they came into the Home-making Class they did not know what to do to occupy their time unless they were continually being looked after, but in a short time they found work for themselves.

There is no special Manual Instruction room at the school, but a few children can go to a Cookery Centre for certain hours in the week. In spite of this, sick cookery is taught in the upper standards of the school and is taken in an ordinary classroom. Miss Tomes stated that several years ago she had had impressed on her the uselessness of girls when they were turned out from Elementary Schools, and she was determined that they should go from her school as useful members of society: this was the one object in her Manual Instruction work.

She was quite clear that this form of Manual Instruction necessitated small classes. No teacher could teach properly more than 20 girls. The Home-making Class had only been going a year, but already Miss Tomes had some experience of its useful results, as children went straight from school to a place either in domestic service or in a shop. Miss Tomes was of opinion that, though Home-making could be taught adequately in the ordinary schoolrooms by ordinary teachers, it would be better to have special rooms and special teachers for Cookery and Laundry Work.

Miss Tomes felt very strongly that the success of Manual Instruction in any form taken in the ordinary classrooms depends entirely upon the teacher, who should be thoroughly in sympathy with the particular kind of work and have received some special training in order that she may be able to develop the interest of the children in their surroundings. In rural schools where a teacher often has classes containing two or three standards, an extra teacher temporarily attached to the staff of the school, who has special ability in Manual Training, should be employed to introduce new methods until ordinary teachers were suitably equipped for such work.

On the question of the desirability of a periodic individual examination of the children, Miss Tomes considered that such an examination would be a considerable incentive to teachers, as all good teachers liked being criticised. At present both the children and their parents seemed to be satisfied with the ordinary examination undertaken by the Head Teachers as a criterion of attainments and progress, but it was difficult, under the present system, for teachers to know how their work compared with that in other schools.

(d) Mr. Birkett.

Mr. Birkett is the Inspector of Elementary Education to the Lindsey Education Committee. He said that in 1909 the question of rural education in Elementary Schools was considered at a rural education conference organised by the County Councils' Association, and as a result of this they had decided in Lincolnshire to make a small experiment in the direction of introducing more Manual Work into the schools. In the first instance it was decided that this should apply only to 25 schools, but that these schools should be as far as possible of different types, including—

- (a) The small two-teacher school—under a mistress.
- (b) The small two-teacher school—under a master.
- (c) The large rural school.
- (d) The large school in a town (boys, girls, and mixed).

The chief initial difficulty was that there were very few teachers in the county who were properly trained for the work, but after some consideration it was thought better to make use of the present teachers and start the experiment at once rather than spend many years in training teachers specially.

Mr. Birkett laid great stress on the point that such a scheme as he outlined would not be suitable for every school, and that great care must be exercised in choosing teachers who had an interest in, and an aptitude for, Handwork. No teacher was compelled to take up this work, and all were assured that reasonable latitude would be given for experiments in manual exercises.

One of the general difficulties to be overcome was the lack of special instruction rooms. This has been met more or less satisfactorily in various ways.

In some schools, where the accommodation is considerably in excess of the requirements, a classroom has been converted into a practical instruction room, and in others a portable cooking stove has been fitted in an ordinary classroom and improvised bench tops have been provided for Woodwork. In other cases a practical work room has been provided by voluntary effort or from a local endowment, and in several cases the teachers have offered the use of their kitchens for practical domestic work, although in no case were they asked to do this.

As a matter of organisation, chiefly owing to the smallness of the schools, it was found convenient that Manual Work should be taken on three whole afternoons in the week. For these three afternoons the school became a practical workshop. Mr. Birkett said that in a small school on the previous day some of the boys had been doing light Woodwork, the elder girls were in the Head Teacher's kitchen learning Cookery, and the younger girls were doing plasticine work. In that school there were two teachers. The experiment only cost 200*l.* in the first year and the estimate for the year beginning the 1st May, 1912, is 350*l.** The Manual Work is all correlated with the ordinary work, and he was certain that the children had become much keener in their ordinary work as a result. Moreover, the experiment has had an influence on neighbouring Schools which were not taking Manual Work in the same way, and the school and the children's homes had been brought closer together.

No particular scheme of instruction was put before the teachers, and for this reason the work done in the schools varies greatly, no two attempting exactly similar things.

Courses of instruction embodying *some* of the following were taken in all the schools, the ability, inclination and interest of the teachers deciding the particular subjects which were taken up:—

(a) Educational Handwork, including—

Paper Modelling.
Cardboard Modelling.
Plasticine Modelling.
Raffia Work.
Basket Work.
Indian Basket Work.
Light Woodwork.
Ordinary Woodwork.
Rural Carpentry.

(b) Gardening.

(c) Nature Study.

(d) Drawing and Brushwork.

(e) Domestic Subjects, including—

- (i) Practical Needlework;
- (ii) Simple lessons on the "Making of the Home" and embracing—
Cookery, suitable for cottagers.
Lessons in Laundry Work.
General Household Management.
Infant Care and Management.

* In reply to subsequent enquiries Mr. Birkett furnished the following additional information:—

- (1) The cost of the equipment for practical instruction in five elementary schools was as follows, the number of students on the register in each school is shown in brackets:—4*l.* 11*s.* 6*d.* (44); 7*l.* 16*s.* 11*d.* (56); 7*l.* 6*s.* 2*d.* (128); 5*l.* 2*s.* 4*d.* (21); 6*l.* 9*s.* 7*d.* (60). The varying amounts are accounted for by the different kinds of practical work adopted in different schools.
- (2) In some schools a portable cooking range has been placed in a classroom at a cost of from 3*l.* to 4*l.*
- (3) In three cases practical work rooms have been provided by voluntary efforts. The cost has varied from 35*l.* to about 60*l.* according to size and accommodation. These rooms are used by the boys for manual work and by the girls for domestic work.

One of the features of the system was that they had got over the difficulty of special rooms and special teachers which it was always said were wanted for Manual Work. Personally, Mr. Birkett considered that having special subjects buildings and special teachers for a group of schools in sparsely populated districts had many disadvantages. The whole system was too elaborate and it was difficult to correlate the work in the Manual Centre with that in the ordinary school. Though from what he could see the effect had been excellent on the children and especially noticeable in the case of backward children, he was convinced that the other subjects had improved as well, and this was borne out by a recent report of the Board of Education. In order to be able to give more definite particulars on this head, Mr. Birkett proposes to hold an examination in the schools when the Manual Instruction work has been carried on for three years in order to see how the ordinary subjects have been effected.

Mr. Birkett then went on to say that the crux of the whole situation was the training of rural teachers, and they were considering whether some improvement in the training of such teachers could not be made. They had under consideration a scheme for training rural teachers by which they should choose children at the age of 14 and send them to selected Elementary Schools to be trained. In these schools the head teacher would be taken off the staff and would have to educate in school hours eight or ten boys and girls, and also train them in the methods of teaching and class management. These schools would all be schools in which the Manual Training method was in force. By this means it might be possible to get a supply of teachers for the future who were in sympathy with the method and also in sympathy with rural life. Mr. Birkett considered that it was not possible for any one teacher to take more than 30 children if the Manual Instruction method was being employed.

Mr. Birkett was asked his views about an individual periodic examination of children, and stated that whenever a school in Lindsey was considered to be in an unsatisfactory condition it was examined, partly by an inspection and partly by a written examination by Mr. Birkett himself, and he thought that this was the best way of finding out exactly where a school stood, but he did not express any opinion as to the desirability of instituting a system of examinations of the type suggested.

(e) Mr. Rayner.

Mr. Rayner is Headmaster of Hibaldstow Council School in the Lindsey Division of Lincolnshire. The school is in a purely agricultural district. Mr. Rayner described the Lindsey experiment, and said that in his school Manual Instruction had been taken for two years. They were just at the beginning of the third year. Three afternoons a week, amounting to $7\frac{1}{2}$ hours, are devoted entirely to Manual Work, together with Drawing, Needlework, and Brushwork, and also Gardening, but now and again this type of work is introduced into the other lessons as it is difficult to keep it out. The instruction is given entirely by the ordinary staff, which, in addition to Mr. Rayner, consists of two uncertificated teachers and one supplementary teacher. There is no special room for Manual Work.

On the previous afternoon simple Laundry Work was being taken at one end of the room, Woodwork in the middle, and at the other end of the room Standard III. were doing paper-cutting and modelling, and Standard IV. painting from nature. Now and again the girls are taken into Mrs. Rayner's kitchen or washhouse. Now that manual occupations have become organised, Mr. Rayner considers that there is practically no inconvenience, though there was slight inconvenience at first. The desks are fitted with tops which can be fastened on in a few minutes, and in addition to this there is a large table with trestles which is used by the girls for a variety of purposes. Otherwise there is no special furniture. Indeed, it only cost about 7*l.* to equip the inside of the school for Manual Work. In Mr. Rayner's opinion the effect of the Manual method was entirely for good. The children were more reliant, more enterprising, and more alert. The duller children gained a certain self-respect which enabled them to do better than they would have done in their ordinary lessons. The system worked excellently throughout the school. One feature on the girls' side is that all girls over 11 years of age, whatever standard they may be in, are taken in a Home-making Class. The parents, who at first were somewhat sceptical, are now sympathetic, and many parents ask for their girls to go into the Home-making Class. They learn to do everything that is useful in the house—to make clothes and to use a sewing machine.

Mr. Rayner was asked whether he would prefer to go on with the limited appliances at his disposal or under circumstances in which the equipment of a special centre was available. He replied that he would much rather prefer to go on in the present conditions, as he was able to dovetail the Manual Work and other subjects better than could be done at a centre. He felt that a special teacher who saw his pupils only in batches once a week was at a great disadvantage compared with the ordinary teachers in the school. As regards the desirability of ordinary teachers undertaking the work, Mr. Rayner said that two years ago he was himself very unhandy and had learned all the processes by himself with the exception of Gardening. The teacher of the Home-making Class was merely a woman of common-sense, with keenness and energy to prepare her work carefully. He was quite certain that none of the teachers or children would desire to go back to the old régime. He thought that about 65 per cent. of the children in the school were children of farmers and farm labourers, and that over half of them went back to the land, while half of the girls went into domestic service. The whole object of the school was to make education more practical and more real and to teach the children the three R's through things that they saw every day and had been accustomed to all their life. In the last report he had had from the Board of Education Inspector it was stated that the written work of the school had actually improved since the manual method had been introduced. Unfortunately most of the children left at 13 years of age; he had in his school only three children who were 14.

(f) Mr. Shirley.

Mr. Shirley is Assistant Secretary to the Education Committee for Berkshire. He explained that in 1906 the Berkshire Education Committee considered the question of introducing Manual Instruction into the Elementary Schools. In 1907 they decided that at least three hours a week should be given to Drawing and Manual Instruction. They did not define what was meant by Manual Instruction, but left it to the Managers and Head Teachers of each school to select the form considered suitable. As a result of this nearly all the schools in Berkshire have some form of Manual Instruction included in the Curriculum. This usually takes the form of Woodwork, Clay-modelling, Cardboard-modelling, Net-making and similar forms of handicraft.

Since 1909 the Committee have in certain places instituted Manual Instruction Centres for Woodwork, Cookery, and Laundry Work, but these are not yet numerous enough to give all the boys and girls in the county eligible for this instruction an opportunity of attending them. The outlying schools in the Down country of Berkshire are a considerable difficulty, and though something has been done in the way of bringing children to the Special Subjects Centres, this is not possible from a very great distance. In the ordinary Elementary Schools where there are no Special Subjects Centres, the Manual Instruction is carried out by the ordinary teachers, and may be correlated to some extent with the ordinary instruction in History, Geography, and Arithmetic. Mr. Shirley had no doubt that where this was done the children were more interested, and in the hands of a capable teacher such work was a great aid in demonstration. In his opinion, however, it was very necessary to guard against overdoing illustration and explanation by always using the handicraft method. In 1913 there would be 10 Special Subjects Centres, of which four would be equipped for Woodwork, Cookery and Laundry Work, and six for Woodwork and Cookery. In four instances, where there are no Centres, a room in the village has been lent for Manual Instruction work, and the teachers of the school undertake the instruction there. In Mr. Shirley's opinion very few headmasters and mistresses are at present qualified to give systematic Woodwork and Cookery Instruction.

Gardening has been developed to some extent as a manual subject, and at all the newer council schools a garden is provided. Gardening is invariably taught by members of the staff. In two instances in Berkshire both Gardening and Woodwork instruction is given on the school premises to the elder boys by the headmaster of the school, the teacher in each case holding the necessary qualifications, and room being available for this work.

In several schools it has been found desirable to give Gardening instruction in connection with the Nature and Observation lessons given in the classrooms. These gardens are available for any class in the school and not restricted for the instruction or use of a class of 14 boys as required in Schedule III. of the Code.

(g) Mr. E. G. A. Holmes.

Mr. E. G. A. Holmes was, till the Autumn of 1911, Chief Inspector of Elementary Schools under the Board of Education. Since he retired from that post he has published a book dealing with education in Elementary Schools entitled "What is and what might be."

Mr. Holmes is thoroughly in favour of making manual work enter more largely into the training given in Elementary Schools. He considered, however, that there was a great danger of laying down the law and saying that this system must be adopted. The first step in his view was to train up a race of teachers who could teach in this manner. He was convinced that less than 5 per cent. of the present teachers could so teach, but the system would come gradually if teachers were encouraged to teach what they were interested in and to use their own hobbies as a means of teaching. It was much more important that a few Schools where the work was well done should become centres of light for surrounding districts than that any attempt should be made to introduce the system either hurriedly or wholesale. He thought that patience was required and that the greatest hope of advance was that teachers should gradually learn from the best examples of the method which were to be found in various parts of the country. It was, of course, necessary to call attention to these exceptional Schools, and he thought that such a body as the Rural Education Conference could do something to this end. He was quite convinced that this method was worse than useless if the teachers were not properly qualified. If the work were badly done the whole movement would suffer by being discredited.

In his view it was important that the teachers of the School should undertake the manual instruction as then the method would spread throughout the School. An outside teacher might be good if he were a man of exceptional abilities, but it would be difficult for him to have the same interest in his pupils or *vice versa*; nor could he so easily correlate the manual work with the general work of the School. He did not consider that special salaries need be given to teachers who employed this method of instruction: all that was required was to provide them with facilities for teaching in their own way. Mr. Holmes said that the limited experience which he had had of the effects on the children of this method of teaching was that everything became much more real to the children and so affected their whole life. They took an interest in their surroundings and learned to express themselves better. He thought, too, that there was a marked effect in the general intelligence of the children. It made them more adaptable for any walk of life because their whole development was helped forward. Very often the backward child was only backward in booky subjects, and when he had a chance of using his hands and brain together he was found to be anything but backward.

With regard to special training for teaching by the manual method, Mr. Holmes considered that an enthusiastic man did not need a great deal of special training for such subjects as Gardening. He would not stop a teacher from teaching Woodwork or Gardening because he had not been specially trained in these subjects.

With regard to the whole question of this new method of teaching, Mr. Holmes's plan would be to focus attention on the places where it was being done really well, to be patient and let the system grow gradually under the influence of those who are masters of it.

With regard to the second part of the motion before the Committee, Mr. Holmes asked Mr. Bellwood, the author of the motion, the reasons he had for wishing to reinstitute examinations. Mr. Bellwood's reasons were that since the abolition of payment by results teachers had taken advantage of the go-as-you-please system, and the pendulum had swung too far the other way. He urged that parents and future employers ought to know where a child stands, and he did not see how this was to be done in any other way. He would institute examinations—

- (a) to bring slack teachers up to a higher level;
- (b) in order that parents and employers might know how the children were progressing and what standard they had reached.

Mr. Holmes felt strongly that these objects could be attained without examinations. He thought that it would need 100 years for the country to recover from the 30 years of formal examinations conducted by the Education Department. He considered that any system of examination drew teachers away from their proper functions of developing the children. However much they might strive against it they could not help losing sight of what was the chief function of education. Mr. Holmes admitted that children 25 years ago might have been more accurate in some subjects, *e.g.*, in abstract Arithmetic; and gave an example of the results of their accuracy which his own long experience enabled him to cite as a fair example. A class of children had spent a long time in dealing with sums involving many figures which they could add, subtract, multiply, divide, with perfect accuracy; but when he asked them the question, "If a farmer had 108 sheep and he bought 7, how many would he have then?" only one out of the 50 children got the answer right. A third of the class thought it was a multiplication sum, another third a division sum, and the remaining third a subtraction sum. The deadening of intelligence of which this was an example was largely due, in his view, to the examination system. Mr. Holmes considered that the moment teachers had to think of examinations and of competing with other teachers for results all enterprise on the part of pioneers would be stopped. Moreover, he did not think that it would raise the level of the inefficient teachers very much. The standard taken by the Examiner was bound to be low, and even if there were a slight gain in some Schools it would be far outweighed by the loss in others. He did not see any reason for sacrificing the best to the hopeless teachers. Mr. Bellwood told the story of a School in Lincolnshire which was inefficiently taught. An examination was arranged by the Local Education Authority and the Head Teacher gave in his resignation before the examination was held. Mr. Bellwood urged that the examination had helped to find out that the Head Master was inefficient. Mr. Holmes said that there would, no doubt, be found some cases in which teachers were unworthy of their freedom, and in some ways we were probably having the defects of both the old and the new systems; but he thought that efficient inspection, especially when it was completely adapted to the new conditions, should make impossible a case similar to that quoted by Mr. Bellwood. The Inspectors both of the Local Education Authority and of the Government must see that there is no slackness. It should be their business to make a point of seeing that teachers were doing well, and in this work there should be the closest touch and fullest co-operation between local and Government Inspectors. If teachers were dismissed by one Local Education Authority as inefficient it ought to prevent them getting posts under other Local Education Authorities. It was certainly true in his view that if there were to be no examinations there must be an efficient local inspection as well as Government inspection, but there should be no competition between the two kinds of inspection and no overlapping.

Mr. Holmes summed up his principal objections to examinations as follows :—

- (a) They diverted the teacher's mind from the proper business of education, which was the development of all the child's faculties.
- (b) Success in results that can be weighed and measured can be got by mechanical method, without stimulating intelligence at all.
- (c) They produced a lack of life in the children.
- (d) They made it necessary for the teachers always to sacrifice the brighter to the more backward children.

In all good Schools they were now thinking how the children were developing. He would distinguish among the teachers, and give boundless liberty to the best and keep others within certain bounds. Indeed, it might be necessary for a Local Education Authority to say to some teachers that they reserved the right of thoroughly testing the work of their Schools from time to time. But all this could only be brought about by a really good system of inspection. The great point was that the general welfare should not be sacrificed either to bad teachers or to backward children. In inspecting a School there was no objection to an informal examination, which, indeed, was incidental to good inspection, provided that the methods employed were very various. But he was strongly opposed to any system of formal individual examination. It should be part of the duty of the teachers to let the parents know each term how their children were getting on, and a report from a teacher who was familiar with the child would be much more valuable than sending the result of an external examination to the parent.

(h) Mr. Durrant.

Mr. Durrant is Head Master of the National School, Kilham, near Driffield, in the East Riding of Yorkshire. He said that in his School Gardening had been taught for the last eight years. Otherwise there was no Manual Work taken in the School except in Standards I. and II. in which there was a slight extension of the clay modelling done in the Infants' School. He was thinking,

however, of taking cardboard and raffia work to bridge over the gap between Manual Work in the Infants' School and Gardening for older children. He takes, and has always taken, the Gardening himself, and considers that it has had an excellent effect on the children by creating a new interest for them in their work. At present Gardening consists of vegetable and flower gardening, but he proposes to add fruit gardening.

Gardening instruction is correlated with the other work of the School. For instance, in the previous week to his giving evidence before the Committee in dealing with potatoes there was the actual work of choosing and preparing the ground: there would be Composition on the subject of potatoes, a Geography lesson would be given on South America where potatoes came from, History of the reign of Queen Elizabeth would be taken as the time when potatoes were introduced, and in this connection the children were reading "Westward Ho!" both in School and at home. The subject was illustrated in various ways by Drawings by the children from actual objects.

The work was of course closely correlated with Arithmetic. The field was measured, the quantity of potatoes required was calculated, the cost of the whole operations and the price of the product were estimated.

Gardening was taken for two hours a week ordinarily by boys of 11 and upwards. There were only 14 boys over 11 on the School Gardening Class Register. The School consisted of 186 children, boys, girls and infants, under himself as Headmaster and four Assistant Mistresses. Mr. Durrant believed the effect on the children who had been through the Gardening instruction was very good and that the boys had all been gainers by it.

There is a Scholarship of 30*l.* a year in connection with the School which is given after a written examination in all the upper standards by an outside examiner. Mr. Durrant produced the reports of this examiner which were very favourable and commented on the intelligence of the children. Mr. Durrant thought that instruction in Gardening as a basis gave the children a greater opportunity of seeing what they really liked. He had no doubt that this form of teaching had made them more adaptable. They had certainly learned, too, to realise the value of honest and thorough work. It was difficult to point to the careers of children who had gone out into the world and give specific cases in which these results were noticeable, as the first children who had taken Gardening under him were now only about 20 years old and there were not very many of them. He could, therefore, only speak of the effect in School and immediately afterwards. He found that greater interest in work was followed by willing effort. Even though the discipline of the School was very good ordinarily it was made more effective because teacher and scholar had a better feeling towards each other by the less formal and more natural relations. The boys look on Gardening as a pleasure and not as work, and during the whole of the time of instruction questions are being asked and answered in a natural and easy way. He found the parents of the children very interested in the work, chiefly because they thought it was useful. Mr. Durrant said that the other subjects in the School were done well and he had no doubt that the method had had a noticeable effect on the intelligence of the children and their general application to the ordinary subjects of the School.

All the children in the parish with the exception of two attend the Public Elementary School, and nearly all the children stay till they are 14. In reply to a question, Mr. Durrant said that he thought that as a result of Gardening instruction the children were less inclined to go to towns after leaving School. He could not say whether they were more inclined to join Evening Schools.

Asked subsequently about the Scholarship of 30*l.* to which he referred and the method of examination, Mr. Durrant said that the Scholarship was intended to keep one boy at a Secondary School for two years. The examination was held in Arithmetic, Geography, History, English Grammar, and Composition, and was taken by all the top standards. Mr. Durrant thought the examination beneficial. He knew that the teaching profession generally were against examinations, but he was not against special examinations so much as a system of examination throughout the School. He has often thought that he does not know how he stands with relation to others without a test and considers that this particular examination has helped a good many children on, even though they did not get the special Scholarship, as it had directed their energies towards other pursuits.

(i) Mr. A. Holmes.

Mr. Holmes is Headmaster of South Kelsey School, Lincoln. He said that though opposed to payment by results he was strongly in favour of external examinations for all the Schools throughout the county. Children move a good deal about the county and it was necessary to have more uniformity in the syllabus to bring the Schools into line. He thought that Standard III. ought to be uniform all through the county area. The advantages of this would be that when a child moved from one School to another he would find the conditions of work similar to that which he had left. The other main purpose of an examination would be to decide whether a child should be promoted to Standard IV. which was the upper part of the School. He considered that the teachers were uncertain at times, owing to movements of families, whether to put a child up or keep him down, and he himself had often promoted children and regretted it afterwards. An outside authority would take the responsibility for promotion off the teacher's hands. He thought, too, that the children in Standards I., II., and III. would take more interest in their work if they knew an examination was coming towards the end of their time in Standard III. This examination would take place each year for Standard III. and be held on the same day in all Schools in the county area. All children who got over a certain percentage of marks might be put on a county list and their future watched. If they did well they might be drafted from, say, Standard V. to a higher School. Mr. Holmes was not in the habit of sending reports on the children in his School to their parents. He considered that parents would value outside opinions such as a county test much more than those of the teachers. The whole of his views centred round the desirability of making Standard III. uniform throughout the county area.

(j) Mr. Meadon.

Mr. Meadon is Assistant Secretary to the Oxfordshire Education Committee. He said that though a little had been done as yet they were feeling their way towards the introduction of Manual Work as a method of instruction. Their aim is—

- (a) To bridge the gap between the Kindergarten of the Infants and the handwork taken at the top of the School. This would be done by using the Infants' course as a basis in introducing methods by which the children might obtain knowledge for themselves through their own practical experience.
- (b) To include in the curriculum as much constructive work as possible. This work should be such that the ordinary class teacher could undertake it, and it should be closely correlated with and bias the remainder of the work done in the School.
- (c) To encourage teachers to group and correlate subjects as far as possible and allow the scholars scope for developing themselves in unaided work without too much oral instruction.
- (d) To give teachers as much freedom as possible for experiment, especially when it is related to the particular needs of any district. This would not be so much on a uniform plan by means of a cut-and-dried scheme but rather through suggestions.

One of the difficulties which they have to face is that the teachers are not yet able in large numbers to undertake this form of instruction. Last year, however, the Education Committee had sent seven teachers (five men and two women) who were adaptable, and possessed of influence with their colleagues, for a three weeks' course at Scarborough and Barry. They studied cardboard modelling as allied to Arithmetic and Drawing chiefly. A conference was held when they came back and lines of advance for the county were agreed upon between them and the Education Officials. The Committee did not wish for uniformity throughout the Schools, but intended to use these teachers as missionaries to introduce the new method in the way best suited to the teachers of the particular Schools. The seven teachers who were trained at Scarborough and Barry have also been holding classes for other teachers on Saturdays throughout the winter.

Outlined suggestions had just been prepared for altering the method of teaching Arithmetic in the Schools. They had thought of drawing up a special book for the purpose but found that there was a book on Handwork and Practical Arithmetic which just suited their purpose.

Mr. Meadon then went on to say what was being done in the way of Manual Work as a special subject not definitely correlated with the other subjects of the School.

Gardening.—Out of 234 Schools in the county 109 have school gardens. The way in which these are managed is rather peculiar. The Committee pay no rent for the land: the Head Master pays the rent or provides his own garden: the Head Master gets the produce of the land. The Local Education Authority provide seeds and 10s. for manure: they provide materials for tool sheds which are made by the boys; frames, dibbers, &c., are made in the same way. The teaching is usually given by the Head Master or Head Mistress, but in three cases a local gardener does the work. The county is divided into eight districts, and competitions are held in connection with the local shows. Notebooks are kept which show the work done by each boy, together with detailed accounts of the cost of the operations. A full description of the scheme is given in a book on Practical School Gardening by Mr. Elford, the Secretary of the Oxfordshire Education Committee, and Mr. Heaton, the instructor in Gardening. At present there is not sufficient correlation with the other subjects, though it is gradually growing. The system by which the Head Master pays the rent of the land was instituted chiefly for reasons of economy and has worked very well in inducing Schools to take up the work. An extension of gardening work is in operation at Upper Heyford, where there is a scheme for teaching elder children how to keep pigs and poultry for profit. The pigs are attended by the most attentive and industrious of the elder boys who work in the garden, the poultry by the elder and most proficient girls. The work is correlated with Gardening, Nature Study, Arithmetic, Composition, and Cookery. The time-table is arranged to allow 20 minutes practical work each afternoon, and there is one session weekly which is devoted to theory and demonstration. The work is to be managed on business lines, and it is estimated that the work should be self-supporting. Subsequently other subjects, such as dressing poultry for the table and curing bacon, will be added to the course.

Woodwork.—This form of Manual Work is taken only in the top classes. As a rule it demands a separate room, but there are some Schools which are supplied with a bench and tools. The correlation with Arithmetic and Drawing is obvious, but there is little correlation with any other subject.

Laundry, Cookery, and Housewifery.—These are generally carried on by means of centres and special instructresses. The difficulty is in the case of single School areas where it is not possible to put up a centre. They had thought of instruction by travelling vans, but had now come to the conclusion that the best method was by forming classes for Head Teachers and getting provision as best they could. In Council School areas a room is usually rented. In Voluntary School areas, where they could not pay rent for a room, they usually get rooms lent to them: in some cases the teachers' houses were used. In some of these cases no grant was paid for the instruction. The aim has been to get Cookery instruction for every girl in the Schools, and Laundry and Housewifery instruction for as many as possible. In the case of Housewifery they are, in one instance, setting up a centre by buying a house at Witney where girls are to be taught for about five weeks at a time. At Headington a School Manager is building a house for the teachers to live in which will be available for Housewifery instruction. The great difficulty in all these subjects was that a separate room or accommodation was almost a necessity.

Mr. Meadon had no doubt that the effect of this instruction was that the children worked harder and were doing keen, accurate work. The children were more adaptable because the work was practical, manual, and of the type which will fall to the lot of most of them in after life. Though they might not travel over such a range of information, they learned thoroughly and knew how to find out things for themselves. Another effect was that the attendance at the Evening Schools had improved. They had recently drawn up a five years' Course for Evening School gardens lasting from the age of 14 to 19, and in connection with this they had prepared a memorandum on the training that might be given to small-holders.

With regard to examinations, Mr. Meadon was strongly opposed to the introduction of an outside examination. He thought such an examination was not a true test, and that the children could not be got to do their best at it. It was impossible to have such an examination without setting up uniform tests for a district. The teachers would tend to cut off subjects from the Curriculum that were not in the examination; and the syllabuses would tend to become uniform. He was, however, satisfied with an examination of his own boys by their Head Teacher. A teacher should be left free, as there is a large difference between neighbourhoods, even in a small county. If Manual Instruction is developed there is a very ready test at hand. In his opinion by external examinations the best teachers would be depressed and the worst teachers would not be raised above a very low standard. He was of opinion that examinations would kill the new methods about which he had been talking, just as the examination system introduced by the revised Code of 1862 had killed the Handwork mentioned in the Inspectors' Report of 1840. Mr. Meadon quoted from his own experience, and said that he had found a great improvement in the Elementary Schools in the last ten years. He was convinced that the new method would result in children being taught to solve problems for themselves, and though results might be disappointing if they were examined at a particular stage, they were nevertheless on the right lines and would develop more completely.

(k) Mr. C. Elliot.

Mr. Elliot is Headmaster of the Grammar School, Ashby-de-la-Zouch. He held strong views on examinations, and wished for their re-introduction in the Elementary School. He thought the re-introduction of examinations necessary because, in his experience, boys who go to Secondary Schools are not of as good quality educationally as they were under the old system. The examination should be in the three R.'s, and Geography and History. He was quite certain from his experience that boys were not as well prepared in these subjects as they used to be. He did not put it down only to the fact that there were no examinations now; one other cause was that Elementary Schools had taken up more subjects and do not do them so thoroughly. This was his general experience after 27 years as a teacher in a Secondary School. Though he would be inclined to advise the re-introduction of examinations, he would not advise that payments should be made on the results. He considered that the knowledge that an examination was in front of them afforded a great stimulus to the boys. He did not think that teachers would cram the children, and was of opinion that preparation for an examination was a very good form of training; it made for accuracy, and it was difficult to get the same precision without it. He had been formerly in a Secondary School of 80 to 100 boys at Market Deeping, in Lincolnshire. Some of them came with Scholarships from Elementary Schools. It was an agricultural district, and the majority of them went back to farms. He sent in 20 every year for the Cambridge Local Examinations. He would certainly say that the preparation had been good for them. At his present School there were over 25 per cent. free places. About half of the children occupying these free places would not do any good for being admitted in a Secondary School. He was quite certain that Standards VI. and VII. were less high in quality than they were 15 or 20 years ago. He did not think that the introduction of an examination would prevent the teachers branching out in fresh directions.

(l) Mr. T. Johnson.

Mr. Johnson was Headmaster of Seamon's Moss School, near Altrincham, and is now a Junior Inspector of the Board of Education. He said that Seamon's Moss School, where he spent 25 years, was an Elementary School for boys from 8 years of age upwards. The boys were chiefly sons of agriculturists, engineers, and shopkeepers. The problem of the Headmaster was to suit the curriculum to these types. The numbers in the School increased from 50 to 200 in the 25 years. In considering the question Mr. Johnson had first felt that it was necessary that the boys should have more handwork than was usual in Elementary Schools 20 years ago. They began their handwork with a School garden. This developed into minor agricultural work. Gradually the School began to take up such work as land measuring and at times a considerable amount of this kind of work was done for private persons. The garden was quite small, amounting to less than half an acre, and had not been increased even by the growth of the subjects dealt with. They made use of every opportunity to bring the School into closer contact with the agricultural industries of the district. For instance, when seeds were received from the seed merchants they were tested for germinating power. When Mr. Johnson discovered that the boys could test seeds adequately, this led to further seed testing. He received most valuable assistance from Mr. J. S. Remington of the Agricultural Station at Aynsme, Grange-over-Sands, who very kindly supplied full directions for the scientific testing of seeds. He also sent out a circular to farmers offering to test their seeds for purity and germinative energy and to supply them with a report on the quality of the seeds. This was done free of charge. As a result of this, the farmers would send parcels of all the seeds they had received in order that they might be tested at the School. After

the test was completed the farmer was supplied with the tabulated statement showing which were the best seeds. A small hand magnifier was used and weed seeds were taken out. Mr. Johnson gave an illustration of the practical utility of this seed testing for farmers. A farmer found a clover field full of weeds although it had been carefully cleared and on testing a sample of the clover seed with which it had been sown, the boys found that it contained many kinds of weed, such as docks, dodder, bugloss, chickweed, &c. Not only were the seeds tested for germinating power and weed seeds eliminated, but the pure seeds were graded according to size and the germinating energy found. Seed testing needed a considerable amount of arithmetic in working out averages, percentages, and tabulating the results. It required, also, accurate observation, and interested the boys because it bore relation to actual life outside the School. The work had to be done as it came in, and could be fitted in with several of the lessons. They never scrupled to do this kind of work when it was convenient. The result on those boys who were going in for country pursuits was excellent, as it made them realise that cheap seeds might be much dearer in the end than more expensive ones, owing to the weed seeds which the former contained.

In the gardening class there were usually 28 boys, and it was always difficult to choose these from 100 who might be eligible. Gradually they increased the range of the garden work. A fruit plot was added to the ordinary school garden which had at first been a vegetable garden only. A flower garden was then made and part of it was given up to bees. Mr. Johnson could give the names of a considerable number of bee-keepers in the neighbourhood of the School who had first become interested in bees at School and had learned enough there to enable them to make it pay. Indeed, the bee-keeping class was mainly confined to boys who were so circumstanced that they would be able to keep bees themselves at home. The Governors of the School (it was an Endowed School) allowed 15*l.* for plant on the undertaking that there would not be any deficit on the working. This 15*l.* was spent on hives of bees, extractors, and other necessary appliances. Profits on bees were devoted to the purchase of extra tools, gymnastic and sports apparatus, books for the School library, &c.

Another development was Woodwork instruction. There had been since 1904 a Manual Training Centre at Altrincham to which 20 boys from Seamon's Moss could go. Other boys, however, wished to have the opportunity of doing woodwork, and the Governors of the School offered to build a Manual Training room if the County Education Committee would undertake the upkeep. Mr. Johnson's object in suggesting this was that he might have all the forms of Manual Instruction under his eye, and correlate this work with the Gardening and Bee-keeping. He had difficulty in this connection when the boys went to the Centre, as they were not allowed to make such things as were useful in connection with the other practical work. For instance, if Mr. Johnson wished something made for the garden or in connection with bee-keeping, and suggested to the boys that they should make it at their Woodwork Centre, it could not always be done because it interfered with the routine-work of the Centre. The Governors spent 130*l.* on a Manual Instruction shed and the County Council furnished it and provided an Instructor. As a rule, 120 boys of the School, that is six classes, received manual instruction each week, on the remaining four half-days 80 boys from other Schools attended using the room as a Manual Training centre. The result was a great success. The boys could make garden tools, bee-hives, and other apparatus. They made everything that was required for land measuring, and a certain number of the instruments for meteorological observations, in addition to the ordinary woodwork course.

Metal-work was soon added to the Woodwork, and provided perhaps the most interesting side of all the instruction. The boys under the direction of their Manual Teacher, Mr. Harold Kinn, had built a pump and wind-power station which were a complete success. The Woodwork and Metal-work were taken only by boys over 11, and it was found necessary to start handicraft instruction lower in the School. This was done by means of paper cutting, folding, and fixing and other light handicrafts.

Mr. Johnson said that a certain number of boys came to his School from other Altrincham Schools and country Schools near by. Some came five or six miles. There was no bad feeling created, he thought, with teachers in the neighbourhood as the boys he got were not always the best boys of the Schools they left. He felt sure his School was filled with boys whose parents had sound views of education, and the School rapidly got a reputation for practical work. Mr. Johnson said that there had been difficulties in getting suitable teachers since he left, but these had now been overcome, and he believed the School was doing well. He was quite certain that there are many teachers capable of managing successfully Schools of this type.

Mr. Johnson referred to the proposal which is being made in Somerset that 25 Schools should be conducted on the lines of the Lindsey experiment. In his view one of the most successful features in the Lindsey experiment was that the Manual Instruction was given as part of the ordinary instruction in the Schools and by the ordinary teachers, and not at a Centre. He was quite certain that if there was to be good handwork at the top of the School it was necessary to have handwork all through, from the Infants upwards.

Co-ordination with the handwork was naturally greatest in the case of Arithmetic, Mensuration, Drawing, and English. The connection with Arithmetic, Mensuration, and Drawing was obvious. With regard to English, notebooks were kept and everything was jotted down at the time. These notes were subsequently transcribed and amplified.

In 1909, about a year before Mr. Johnson left Seamon's Moss, considerable discussion arose in Cheshire and in other parts of the country as to the probable effect of teaching so much practical work on the efficiency of the teaching of the 3 hours in Elementary Schools. In order to supply an answer to any possible criticism, the Board of Education Inspector carried out an old-time examination of Seamon's Moss School of the type of 20 years ago. The results of this examination were not published. At the bottom of the School, Standard III., the percentages of passes in Reading, Writing, and Arithmetic were only about 40. The work was better in Standards IV. and V. In Standard VI. the percentage of passes was about 85, and in Standard VII., consisting of 40 boys, all passed in Reading and Writing, and only two failed in Arithmetic. A similar

examination was made in other Schools in Cheshire. Mr. Johnson felt most strongly that the gap in Manual Instruction between 7 and 11 was a great drawback. There was nothing to work upon when the child took up Manual Instruction again at the age of 11.

Attached to the School was an exhibition of 20% which was given to the best boy after an examination conducted by an outside examiner, usually the headmaster of a Secondary School. He admitted that Scholarships given after an examination were an inducement to boys to take up certain subjects, but to the teacher they sometimes were a temptation to devote special attention to a few smart children to the neglect of the others.

Mr. Johnson was quite convinced that the training had considerable influence in the choice of occupation made by his boys. They seemed to prefer constructive trades and country work. Some town boys even went into the country and would ultimately become farmers. As an instance he gave the son of a railway clerk who chose to be a farmer. His mind was turned in that direction at School, or, rather, the opportunity of choice was given him and he found that his bent was really in that direction.

With regard to his experience as an Inspector, Mr. Johnson said that he had inspected School gardens in several parts of the country, and in connection with this work he inspected a good deal of instruction connected with country work. He was unable to say, however, except for Gardening, how far Manual Instruction as a new method was carried on in England. With regard to Somerset, which was his own district, manual training of some kind was to be found in nearly all the Schools. This was a growth of the last few years. He was convinced that it was of no benefit to try to introduce Manual Instruction except where there were teachers who understood the work. Unfortunately some teachers were apt to consider it as a separate subject. With regard to the experiment which was about to be tried in 25 Somerset Schools, most of the teachers had been through Holiday Courses, organised by the Somerset Local Education Authority. It was hoped that the experiment would begin in September, 1912.

With regard to the question of Examinations, Mr. Johnson had the very strongest objection to any individual form of examination. He considered that any move towards introducing such an examination would be entirely in the wrong direction. He had had a long experience as a teacher under both systems—individual examination, and inspection—and was convinced that under the old system the children had their intelligence and initiative crushed. The amount of examination which could be combined with inspection was quite enough for all purposes.

APPENDIX III.

ACCOUNT OF THE WORK AT EDNAM PUBLIC SCHOOL, ROXBURGH COUNTY.*

The Parish of Ednam is a rural parish close to Kelso in the County of Roxburgh, and it contains a population of 495 within an area of 3,846 acres. The village, in which the School is situated, is about 3 miles from Kelso Station.

The School at the present moment has 97 scholars on roll. There is a staff of three Teachers, namely, a Headmaster, Mr. Macdonald, and two female assistants. The Infants and some of the children of the Junior Division are in one room, and the rest of the scholars are in two rooms divided by a folding partition, which is frequently folded back so that one Teacher may supervise the work in the two rooms.

In the Infant and lower Junior Classes good work is done on familiar but up-to-date lines. Reading is well advanced, taught on a phonic system; Writing—which is done entirely from paper from the very commencement—is good, and the elements of Arithmetic are well taught. Hand and Eye Training is attended to, and some nice work is shown in Mat Weaving, Clay-modelling and Plasticine.

In the Intermediate Section work is carried on in a similar way with satisfactory results. The usual school subjects are taken up, but Hand and Eye Training is also carried on. Recently this has been mainly Clay-modelling, but a scheme of paper-folding and Cardboard Modelling is being prepared.

In the highest Section the Headmaster is responsible for two Classes, one Supplementary Class, and the Qualifying Class, that is the Class preparing for the Qualifying Examination.

By the Scotch Code, before a child can be enrolled in a recognised Supplementary Course, and be registered for Grant under Article 21, he must pass an Examination (*see* Article 29 of the Code) which is now popularly called the Qualifying Examination. To show the scope of this test, a quotation is made from Article 29 of the Scotch Code.

“A pupil presented as aforesaid will be expected—

- “(a) To read at sight with good pronunciation and with intelligent phrasing, narrative prose of moderate difficulty.
- “(b) To write to dictation, with good spelling and legible and regular handwriting, a narrative passage previously unseen.
- “(c) To answer questions as to the subject matter of and the meaning of words and sentences in the reading books in use in the Class; these answers, when necessary, to be expressed in complete sentences or in a consecution of sentences.
- “(d) To write a composition, the heads being given, or to give in writing the substance of a passage read.

* This account has been furnished to the Committee by the Scotch Education Department.

“(e) To know the four rules of Arithmetic as applied to whole numbers, easy vulgar fractions, and decimals to three places, and to be expert in applying this knowledge to the calculation both mentally and on paper, of simple sums in money, and in the common weights and measures.

“(f) To be reasonably proficient in the other subjects included in the approved Scheme of Work of the Class.”

In Ednam, then, the Headmaster takes the Class containing the children preparing for this Examination, as well as the Supplementary.

At present there are 17 scholars enrolled in the Supplementary and 12 in the Qualifying. This is a very creditable percentage, for it has been found by experience that it is difficult for Schools to get 10 per cent. or more of their total enrolment into the Supplementary Course. So that a School such as this, which can show 17 per cent., or rather better, has every reason to be satisfied with the instruction it gives to the children in the preliminary stages.

Normally it is expected that a child should be presented for this Examination at the age of 12, or shortly after, and the Higher Rate of Grant under Article 21 of the Code is only paid on those children who are 12 years of age. So that a Supplementary Class may be considered as one containing normally children over 12 years of age, and who have passed the Qualifying Examination.

The work done in Ednam up to the stage of the Qualifying Examination is uniformly of good quality, but is on familiar and normal lines.

However, in the Supplementary Class a great change is made, for henceforth the pupil does not give up all the hours of his school day to the normal and usual school subjects, but devotes a great part of his time to subjects of Practical Instruction. Seven such subjects are professed: namely, Woodwork, Gardening, Cookery, Laundry-work, Dressmaking, Experimental Science, and Dairying.

Two hours every day are given up to this Practical Work, and on one morning of the week the Boys have two hours at Woodwork while the Girls have two hours of their work in the afternoon. Both Boys and Girls receive instruction in Gardening, Cookery, Science and Dairying, while Boys only do Woodwork, and Laundry-work and Dressmaking are confined to the Girls.

Woodwork and Cookery are taken once a week the whole year through: Laundry-work and Dressmaking alternately once a fortnight. Dairying—*i.e.*, mainly Butter-making—twice a week in season, say from April till December: Science twice a week in lieu of Dairying. Gardening nominally is taken once a week, but Science or other work may be substituted in winter.

The Headmaster is responsible for the instruction in Gardening, Science, Dairying, and Woodwork: while the Infant Teacher, Miss Kennedy, takes the Cookery, Laundry-work, and Dressmaking. It is perhaps not the least remarkable thing about this School that both these Teachers have obtained the qualifications necessary for teaching these subjects during the last few years, by attending vacation and other Classes for Teachers. This redounds greatly to their credit.

In the Supplementary Class the work done is of good quality both in the Practical Subjects and otherwise. The profession of work in the ordinary School subjects is quite as much as is usually met with in Schools which do not provide so much Practical Instruction, and it can be said that in Ednam they justify satisfactorily their profession. There is one feature of their work, however, which deserves note. Of recent years a play of Shakespeare has been studied and this is followed by the play being acted. It is creditable to the School and all concerned that the representation of this play is well done, and is much appreciated by the large numbers that go to see it.

It is, I think, a fair criticism to say that the Scheme of Work in ordinary subjects is somewhat ambitious: for instance, some attempt is made to teach the elements of Solid Geometry; possibly a little pruning would do no harm. At present the work is got over by means of a six-hours' day, and by a tendency to employ cram methods.

This School has gained a reputation, and deservedly, for its development of Practical Instruction. This is, of course, the notable feature in the School, and it is not the least notable from the fact that the Practical Work is part of the daily routine, that so many hours a week are given up to some form of this work, and that there is a certain elasticity in arranging that seasonal subjects such as Dairying and Gardening should have ample time when needed, and that there is something else to fill their place when out of season. Another notable point is that the pupils have much to do, and do it, and further that, as in the upper part of the School one Teacher has frequently to supervise several Classes, the children necessarily become self-reliant and able to work by themselves.

To sum up, it may be said that, taken as a whole, the work is of good average quality, but in view of the heavy profession it deserves distinct commendation.

A magnificent new School Building has been recently completed: new Schemes of Work have just been drawn up, and Science, for instance, has been introduced as a new subject.

APPENDIX IV.

NUMBER AND PERCENTAGE OF PUBLIC ELEMENTARY SCHOOLS WHOSE SCHOLARS
COUNTY COUNCILS (OTHER THAN LONDON) FOR

NOTE.—The Statistics relate to the Year ending 31st July 1911, except that in the case of Gardening instruction in a combined course of Cookery, Laundry Work and Housewifery.

Since instruction is frequently given in more than one subject to some or other of the scholars attending the figures shown in Columns 9, 14 and 15. Similar remarks apply also as regards the totals of the be regarded as some indication of the relative extent to which instruction in Special Subjects has permeated various areas in order.

An asterisk is prefixed to the names of counties in Wales, and separate totals for England and Wales not in the total for England.

Area under County Council.		Total No. of Schools on 31st July 1911.	Number of Schools whose Scholars received Instruction in Subjects													Reference No.
			Taught to Girls.							Taught to Boys.					Total of Columns 9 and 14.	
			Cookery.	Laundry Work.	Housewifery.	Combined Domestic Subjects.	Dairy Work.	Gardening.	Total.	Cookery.	Gardening.	Handicraft.	Light Woodwork.	Total.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.		
Surrey -	265	118	41	27	4	—	2	192	—	136	88	—	224	416	1	
Middlesex -	121	74	—	—	—	—	1	75	—	30	62	1	93	168	2	
Wight, Isle of -	53	33	—	—	—	—	1	34	—	28	—	—	28	62	3	
Staffordshire -	374	139	11	—	—	—	14	164	—	171	65	12	248	412	4	
Essex -	437	254	31	1	—	—	11	297	5	93	85	—	183	480	5	
Cheshire -	336	133	55	—	21	—	—	209	—	45	100	—	145	354	6	
Suffolk, East -	244	41	20	—	—	—	36	97	—	106	40	—	146	243	7	
Buckingham -	246	80	17	4	—	—	11	112	—	65	10	16	91	203	8	
*Flint -	103	40	9	—	—	1	4	54	—	11	19	—	30	84	9	
Gloucester -	393	96	50	13	11	1	4	175	—	77	67	—	144	319	10	
Hertfordshire -	254	119	4	2	1	—	4	130	—	33	41	—	74	204	11	
Cambridge -	140	33	3	1	—	—	4	41	—	35	31	—	66	107	12	
*Montgomery -	100	17	9	8	3	—	6	43	—	31	—	—	31	74	13	
Somerset -	501	250	27	11	4	—	—	292	—	41	29	—	70	362	14	
Sussex, West -	161	67	1	—	—	—	—	68	1	42	1	—	44	112	15	
Durham -	395	201	11	—	—	—	—	212	—	14	37	—	51	263	16	
Oxford -	233	39	4	—	—	—	5	48	—	97	8	—	105	153	17	
Wiltshire -	336	34	11	10	55	6	1	117	—	78	23	—	101	218	18	
Worcester -	248	79	—	—	—	—	3	82	—	42	35	—	77	159	19	
*Carnarvon -	148	47	15	—	—	—	—	62	—	7	22	—	29	91	20	
Warwick -	259	76	—	—	—	—	—	76	—	32	47	—	79	155	21	
*Denbigh -	130	23	12	—	—	—	—	35	—	18	16	1	35	70	22	
Lancashire -	710	160	37	6	2	—	23	228	—	76	66	1	143	371	23	
Cumberland -	255	75	6	—	—	—	1	82	—	39	9	—	48	130	24	
Kent -	441	84	19	4	1	—	1	109	—	72	38	2	112	221	25	
Leicester -	269	49	5	1	—	—	4	59	—	40	26	2	68	127	26	
Norfolk -	494	142	21	—	—	—	1	164	—	42	21	—	63	227	27	
Cornwall -	322	79	4	—	—	30	—	113	—	21	14	—	35	148	28	
Sussex, East -	177	39	—	—	—	—	4	43	—	38	—	—	38	81	29	
*Anglesey -	67	16	4	—	3	—	—	23	—	—	5	—	5	28	30	
West Riding, Yorks -	890	173	45	6	—	—	3	227	—	49	92	1	142	369	31	
Bedfordshire -	139	20	—	—	—	—	1	21	—	30	1	—	31	52	32	
Derby -	389	99	—	—	—	—	2	101	—	39	5	—	44	145	33	
Berkshire -	211	35	4	—	—	—	1	40	—	16	20	—	36	76	34	
Nottinghamshire -	246	59	7	—	—	—	—	66	—	9	6	—	15	81	35	
*Monmouth -	185	7	2	—	50	—	—	59	—	—	1	—	1	60	36	
Westmorland -	107	19	—	—	—	—	3	22	—	11	1	—	12	34	37	
Suffolk, West -	171	13	—	—	—	—	1	14	—	36	4	—	40	54	38	
Dorset -	269	62	—	—	—	—	—	62	—	20	—	—	20	82	39	
*Glamorgan -	243	39	1	1	—	—	1	42	—	9	22	—	31	73	40	

APPENDIX IV.

RECEIVED INSTRUCTION IN SPECIAL SUBJECTS DURING 1910-11, IN THE AREAS UNDER THE PURPOSE OF ELEMENTARY EDUCATION.

they relate to the Year ending 31st October 1911. Instruction in Combined Domestic Subjects means any one School, the number of individual Schools is often less, and sometimes very considerably less, than percentages shown in Columns 22, 27 and 28. The total percentages shown in Column 28 may, however, throughout the various counties, and have accordingly been taken as a basis for the arrangement of the are given at the end of the Table. The figures for Monmouthshire are included in the total for Wales, and

Reference No.	Percentage to Total Number of Schools (Column 2) of Schools whose Scholars received Instruction in Subjects													Total of Columns 22 and 27.
	Taught to Girls.							Taught to Boys.						
	Cookery.	Laundry Work.	Housewifery.	Combined Domestic Subjects.	Dairywork.	Gardening.	Total.	Cookery.	Gardening.	Handicraft.	Light Woodwork.	Total.		
	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	
1	44.5	15.5	10.2	1.5	—	0.8	72.5	—	51.3	33.2	—	84.5	157.0	
2	61.2	—	—	—	—	0.8	62.0	—	24.8	51.2	0.8	76.8	138.8	
3	62.3	—	—	—	—	1.9	64.2	—	52.8	—	—	52.8	117.0	
4	37.2	2.9	—	—	—	3.7	43.8	—	45.7	17.4	3.2	66.3	110.1	
5	58.1	7.1	0.2	—	—	2.5	67.9	1.1	21.3	19.5	—	41.9	109.8	
6	39.6	16.4	—	6.3	—	—	62.3	—	13.4	29.8	—	43.2	105.5	
7	16.8	8.2	—	—	—	14.8	39.8	—	43.4	16.4	—	59.8	99.6	
8	32.5	6.9	1.6	—	—	4.5	45.5	—	26.4	4.1	6.5	37.0	82.5	
9	38.8	8.7	—	—	1.0	3.9	52.4	—	10.7	18.4	—	29.1	81.5	
10	24.4	12.7	3.3	2.8	0.3	1.0	44.5	—	19.6	17.0	—	36.6	81.1	
11	46.9	1.6	0.8	0.4	—	1.6	51.3	—	13.0	16.1	—	29.1	80.4	
12	23.6	2.1	0.7	—	—	2.9	29.3	—	25.0	22.1	—	47.1	76.4	
13	17.0	9.0	8.0	3.0	—	6.0	43.0	—	31.0	—	—	31.0	74.0	
14	49.9	5.4	2.2	0.8	—	—	58.3	—	8.2	5.8	—	14.0	72.3	
15	41.6	0.6	—	—	—	—	42.2	0.6	26.1	0.6	—	27.3	69.5	
16	50.9	2.8	—	—	—	—	53.7	—	3.5	9.4	—	12.9	66.6	
17	16.7	1.7	—	—	—	2.1	20.5	—	41.6	3.4	—	45.0	65.5	
18	10.1	3.3	3.0	16.4	1.8	0.3	34.9	—	23.2	6.8	—	30.0	64.9	
19	31.9	—	—	—	—	1.2	33.1	—	16.9	14.1	—	31.0	64.1	
20	31.8	10.1	—	—	—	—	41.9	—	4.7	14.9	—	19.6	61.5	
21	29.3	—	—	—	—	—	29.3	—	12.4	18.1	—	30.5	59.8	
22	17.7	9.2	—	—	—	—	26.9	—	13.8	12.3	0.8	26.9	53.8	
23	22.5	5.2	0.8	0.3	—	3.2	32.0	—	10.7	9.3	0.1	20.1	52.1	
24	29.4	2.4	—	—	—	0.4	32.2	—	15.3	3.5	—	18.8	51.0	
25	19.0	4.3	0.9	0.2	—	0.2	24.6	—	16.3	8.6	0.5	25.4	50.0	
26	18.2	1.9	0.4	—	—	1.5	22.0	—	14.9	9.7	0.7	25.3	47.3	
27	28.7	4.3	—	—	—	0.2	33.2	—	8.5	4.3	—	12.8	46.0	
28	24.5	1.2	—	—	9.3	—	35.0	—	6.5	4.4	—	10.9	45.9	
29	22.0	—	—	—	—	2.3	24.3	—	21.5	—	—	21.5	45.8	
30	23.9	5.9	—	4.5	—	—	34.3	—	—	7.5	—	7.5	41.8	
31	19.4	5.1	0.7	—	—	0.3	25.5	—	5.5	10.3	0.1	15.9	41.4	
32	14.4	—	—	—	—	0.7	15.1	—	21.6	0.7	—	22.3	37.4	
33	25.4	—	—	—	—	0.5	25.9	—	10.0	1.3	—	11.3	37.2	
34	16.6	1.9	—	—	—	0.5	19.0	—	7.6	9.5	—	17.1	36.1	
35	24.0	2.8	—	—	—	—	26.8	—	3.7	2.4	—	6.1	32.9	
36	3.8	1.1	—	27.0	—	—	31.9	—	—	0.5	—	0.5	32.4	
37	17.8	—	—	—	—	2.8	20.6	—	10.3	0.9	—	11.2	31.8	
38	7.6	—	—	—	—	0.6	8.2	—	21.1	2.3	—	23.4	31.6	
39	23.0	—	—	—	—	—	23.0	—	7.4	—	—	7.4	30.4	
40	16.0	0.4	0.4	—	—	0.4	17.2	—	3.7	9.1	—	12.8	30.0	

Area under County Council.	Total No. of Schools on 31st July 1911.	Number of Schools whose Scholars received Instruction in Subjects													Reference No.
		Taught to Girls.							Taught to Boys.					Total of Columns 9 and 14.	
		Cookery.	Laundry Work.	Housewifery.	Combined Domestic Subjects.	Dairy Work.	Gardening.	Total.	Cookery.	Gardening.	Handicraft.	Light Woodwork.	Total.		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	
Huntingdon	90	13	—	—	—	—	—	13	—	12	2	—	14	27	1
North Riding, Yorks.	398	38	6	—	—	—	6	50	—	63	5	1	69	119	2
Southampton (Hants.)	353	38	—	—	8	—	1	47	2	45	7	—	54	101	3
*Pembroke	122	22	1	1	—	—	3	27	—	7	1	—	8	35	4
Lindsey, Lincoln	330	17	11	—	—	—	6	34	—	41	17	—	58	92	5
Northants	265	21	—	—	—	—	—	21	—	28	19	—	47	68	6
Hereford	178	—	—	—	5	—	9	14	—	30	—	—	30	44	7
Ely, Isle of	75	10	1	—	—	1	—	12	—	3	3	—	6	18	8
*Radnor	51	4	3	—	—	—	1	8	—	3	1	—	4	12	9
Kesteven, Lincoln	170	16	2	—	—	—	—	18	—	13	8	—	21	39	10
Salop	280	18	—	—	—	—	—	18	—	40	1	1	42	60	11
Northumberland	276	4	—	2	—	—	7	13	—	40	—	—	40	53	12
*Merioneth	79	6	—	—	—	—	—	6	—	1	3	—	4	10	13
Devon	544	41	9	—	—	—	—	50	—	11	2	—	13	63	14
*Cardigan-	106	5	2	—	—	—	—	7	—	4	1	—	5	12	15
Rutland	38	—	—	—	—	—	1	1	—	2	1	—	3	4	16
*Carmarthen	157	—	—	—	—	—	4	4	—	10	—	—	10	14	17
*Brecon	85	7	—	—	—	—	—	7	—	—	—	—	—	7	18
East Riding, Yorks.	212	5	—	—	—	—	—	5	—	12	—	—	12	17	19
Peterborough, Soke of	19	—	—	—	—	—	—	—	—	1	—	—	1	1	20
Holland, Lincoln [Scilly, Isles of]	84	—	—	—	—	—	—	—	—	1	—	—	1	1	21
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	22
Total for England	13,403	3,195	463	88	112	38	172	4,068	8	2,045	1,137	37	3,227	7,295	23
Total for Wales	1,576	233	58	10	56	1	19	377	—	101	91	1	193	570	24
Total for England and Wales.	14,979	3,428	521	98	168	39	191	4,445	8	2,146	1,228	38	3,420	7,865	25

Reference No.	Percentage to Total Number of Schools (Column 2) of Schools whose Scholars received Instruction in Subjects												
	Taught to Girls.							Taught to Boys.					Total of Columns 22 and 27.
	Cookery.	Laundry Work.	Housewifery.	Combined Domestic Subjects.	Dairy Work.	Gardening.	Total.	Cookery.	Gardening.	Handicraft.	Light Woodwork.	Total.	
	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.
1	14.4	—	—	—	—	—	14.4	—	13.3	2.2	—	15.5	29.9
2	9.5	1.5	—	—	—	1.5	12.5	—	15.8	1.3	0.3	17.4	29.9
3	10.8	—	—	2.3	—	0.3	13.4	0.6	12.7	2.0	—	15.3	28.7
4	18.0	0.8	0.8	—	—	2.5	22.1	—	5.7	0.8	—	6.5	28.6
5	5.2	3.3	—	—	—	1.8	10.3	—	12.4	5.2	—	17.6	27.9
6	7.9	—	—	—	—	—	7.9	—	10.6	7.2	—	17.8	25.7
7	—	—	—	2.8	—	5.1	7.9	—	16.9	—	—	16.9	24.8
8	13.3	1.3	—	—	1.3	—	15.9	—	4.0	4.0	—	8.0	23.9
9	7.8	5.9	—	—	—	2.0	15.7	—	5.9	2.0	—	7.9	23.6
10	9.4	1.2	—	—	—	—	10.6	—	7.6	4.7	—	12.3	22.9
11	6.4	—	—	—	—	—	6.4	—	14.3	0.4	0.4	15.1	21.5
12	1.4	—	0.7	—	—	2.5	4.6	—	14.5	—	—	14.5	19.1
13	7.6	—	—	—	—	—	7.6	—	1.3	3.8	—	5.1	12.7
14	7.5	1.7	—	—	—	—	9.2	—	2.0	0.4	—	2.4	11.6
15	4.7	1.9	—	—	—	—	6.6	—	3.8	0.9	—	4.7	11.3
16	—	—	—	—	—	2.6	2.6	—	5.3	2.6	—	7.9	10.3
17	—	—	—	—	—	2.5	2.5	—	6.4	—	—	6.4	8.9
18	8.2	—	—	—	—	—	8.2	—	—	—	—	—	8.2
19	2.4	—	—	—	—	—	2.4	—	5.7	—	—	5.7	8.1
20	—	—	—	—	—	—	—	—	5.3	—	—	5.3	5.3
21	—	—	—	—	—	—	—	—	1.2	—	—	1.2	1.2
22	—	—	—	—	—	—	—	—	—	—	—	—	—
23	23.8	3.5	0.7	0.8	0.3	1.3	30.4	0.1	15.3	8.5	0.3	24.2	54.6
24	14.8	3.7	0.6	3.6	0.1	1.2	24.0	—	6.4	5.8	0.1	12.3	36.3
25	22.9	3.5	0.7	1.1	0.3	1.3	29.8	0.1	14.3	8.2	0.3	22.9	52.7

BOARD OF AGRICULTURE AND FISHERIES AND
BOARD OF EDUCATION.

EIGHTH REPORT
OF THE
RURAL EDUCATION CONFERENCE.

MANUAL PROCESSES OF
AGRICULTURE.

Presented to Parliament by Command of His Majesty.



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This Report was prepared by the Rural Education Conference which was constituted by Minutes of the Presidents of the Board of Agriculture and Fisheries and of the Board of Education, dated 4th February and 20th June, 1910 (H.C. 63, 1910).

The following is a list of the earlier Reports of the Conference, copies of which may be purchased either directly or through any Bookseller, from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C. :—

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RURAL EDUCATION CONFERENCE.

EIGHTH REPORT.

MANUAL PROCESSES OF AGRICULTURE.

1. The Conference have had under consideration the following Reference received from the Board of Agriculture and Fisheries in November last :—

“To enquire into the methods which Local Education Authorities adopt with the object of promoting efficiency in the performance of Manual Processes, *e.g.*, Ploughing, Hedging, Ditching, Sheep-shearing, Milking and Basket-making, and to advise as to any further action that may appear to be desirable for the purpose of developing skill in workmen employed in Agriculture.”

2. We have adopted the Report of a Committee presided over by the Earl of Shaftesbury, K.P., K.C.V.O., which held five meetings and interviewed the witnesses whose names are set out in Appendix I. The bulk of the evidence received related to the provision of, or need for, instruction for boys and men already employed in agriculture, but several witnesses referred to the desirability of providing instruction in manual agricultural processes for boys and girls attending rural elementary schools.

3. It is desirable, for the sake of clearness, to keep the consideration of the requirements of (1) children of elementary school age and (2) boys and men employed upon the land, as distinct as possible.

CHILDREN OF SCHOOL AGE.

4. Earlier Reports of the Conference, although they have not dealt definitely with the manual processes of agriculture, have emphasised the need of the education that is provided at rural elementary schools being of a more practical character than it is at present. In the Report on the Qualification of Teachers of Rural Subjects in Elementary Schools,* we expressed the opinion that “the curriculum in rural schools should be less literary than it is at present, and with this object in view, it should be based upon the employment of manual processes as a method of education, though it should not be forgotten that the aim of practical instruction in the elementary schools should always be the general development of the faculties rather than specialised technical training.” Again, in our last Report† we urged the extension of the manual method of instruction in rural schools, and pointed out that in schools where this method has been introduced “the development of the children’s faculties has been helped by the fact that they have been given work to do which they have recognised as definitely useful, with the result that they have become more adaptable for their work in after life.” The Report also states that several of the witnesses who gave evidence on that subject “laid stress upon the success with which the method has been employed in teaching children who have hitherto been considered to be dull or backward. The parents too have welcomed the method employed, and have become more interested in what their children have been taught.”

5. We have no complete data upon which to base any calculation as to the number of counties in England and Wales in which instruction in manual agricultural processes, other than gardening, is provided for children at rural elementary schools, but it is safe to say that such provision has been made in very few. One of our members, Mr. Grant, gave evidence as to the system adopted in Monmouthshire by which children are instructed at different centres during school hours in certain of the manual processes of agriculture, such as milking, hedging, sheep-shearing, and basket-making, as a part of the curriculum of some of the rural elementary schools, the instruction being given by the members of the County Agricultural Staff, and attendance at these classes counting as attendance at

* [Cd. 5773], 1911.

† [Cd. 6571], 1913.

school.* In Wilts† also elementary school children are taught milking and thatching under the direction of the County Agricultural Education Committee. We consider that such instruction is of great value in interesting boys and girls in agricultural pursuits, and, when given by a capable teacher and under proper supervision, the result is entirely beneficial. We therefore recommend that other counties should consider the adoption of a similar system in their rural areas, and that the selection of the pupils who are to receive instruction in manual agricultural processes should be made in consultation with the parents of the pupils and the head teacher.

6. We are further of opinion that if more farmers gave employment, combined with explanatory instruction, on their farms to boys during the school holidays and paid them a suitable wage for their work, the interest which most boys now take in farm work when they leave school, would be very greatly increased; the tendency for them to seek employment in the town rather than remain in the country would be materially checked; and their skill as agriculturists would be considerably developed.‡

7. We also recommend that more Local Education Authorities and the managers of rural elementary schools should regulate the holidays so as to leave boys free to be employed on the land at a time when their work is most required. The adoption of such a plan would, we believe, be of the utmost value to both the employer and employees.

BOYS OVER SCHOOL AGE AND MEN.

8. The extent to which Local Education Authorities provide instruction in manual processes of agriculture for pupils over elementary school age may be seen from Appendix II. of the Annual Report of the Board of Agriculture and Fisheries on the Distribution of Grants for Agricultural Education and Research for 1911-12.§ From this Report it appears that in 31 administrative counties in England and Wales no provision is made by the Local Education Authority for instructing agricultural labourers in manual processes. The extent to which the remaining 30 counties provide instruction in these subjects and the methods adopted by them vary considerably. We have received striking evidence not only as to the value of the instruction in the counties in which it is being provided, but also as to the need for instruction in counties in which no provision for this type of instruction has been made. The President of the Yorkshire Union of Agricultural Clubs and Chambers of Agriculture, for example, stated that in his opinion, in Yorkshire (in which county the Local Authorities do not provide instruction in manual processes) nine out of 10 farmers could not instruct their employees in cutting and laying hedges.|| We accordingly recommend all Local Education Authorities to provide instruction in manual processes for young farmers and agricultural labourers. In many counties it will not be necessary to make provision for instruction in every process, but in every county it is probable that instruction could with great advantage be provided in some processes, and a start should be made in those in which instruction is most needed.

Methods employed by Local Authorities.

9. The following methods are those principally adopted by Local Education Authorities to provide instruction in manual processes for agriculturists, some Authorities employing more than one method:—

(a) At Farm Schools or Agricultural Colleges.

We have received evidence that a large number of farmers are themselves unable to perform some of the manual processes in agriculture and we are of opinion that the curriculum at Farm Schools and other agricultural institutions which are attended by farmers' sons should include a thorough course in manual work with a training in imparting instruction in order that the students when they return to their farms may be in a position to instruct their own farm hands.¶

(b) By employing Itinerant Instructors.

This is the method adopted by most counties which make provision for instruction in these subjects. The work of the instructors is to conduct classes at suitable centres and in some cases, by arrangement with the farmers, to visit farms in order to give workmen instruction in their ordinary employment. As in all forms of education, the value of instruction in manual processes depends more on the capability of the instructor than on any other factor. We have been informed that great difficulty is

* Appendix II. (a).
§ [Cd. 6601], 1913.

† Appendix II. (h).
|| Appendix II. (d).

‡ See Appendix II. (e) and (k).
¶ Appendix II. (f).

experienced in finding suitable instructors in manual processes. Two reasons have been given for this: (1) that there are few men who combine the ability to teach with exceptional skill in the performance of the process (such skill being, of course, essential in a practical instructor); and (2) that where such men do exist, they are not willing to engage in instruction unless they are certain of obtaining permanent employment. To meet the second of these difficulties we recommend that a county which cannot usefully employ the whole services of an instructor should combine with a neighbouring county or with neighbouring counties for the purpose, and we think that the Advisory Councils which are being formed throughout the country as a result of the recommendations contained in the Sixth Report of this Conference, will help to enable this to be carried out. With regard to the first difficulty, we think that if instructors are carefully selected and their work is regularly supervised by the County Agricultural Organiser or Lecturer their ability to impart their knowledge to others will undoubtedly improve. For this reason we recommend the employment of one or more permanent instructors rather than the employment from time to time, as required, of local instructors, although we recognise that there may be in certain districts local practices which may make the employment of local instructors preferable.

(c) Through a local agricultural society.

In some cases the detailed arrangements for holding classes are undertaken by a local agricultural society, the instructor being provided by the County Council; in other cases a special local committee is appointed for this purpose. Where an agricultural society exists in the neighbourhood useful results are obtained by enlisting its co-operation. The Berkeley Hunt Agricultural Society,* for instance, who themselves provided classes in agricultural processes for many years, have for some time rendered valuable assistance to the Gloucestershire County Council in working up local interest in the instruction and in making the local arrangements upon which the successful conduct of the classes must largely depend. In other cases Local Authorities make grants to local societies to assist in the provision of prizes at competitions held usually in connection with an agricultural show. We recommend Local Authorities to make these grants if satisfactory arrangements are made for the provision of sufficient instruction to the competitors beforehand, such instruction to be obtained within a reasonable time of the competition.

Duration and Subjects of Instruction.

10. The duration of the instruction provided in different counties varies considerably. We have received evidence to the effect that the Local Government Board Auditors do not permit Local Education Authorities to award prizes in connection with competitions unless the competitors have previously received instruction.† In some counties, in order to comply with the requirements of the Auditors, instruction of a nominal character is provided and many of the students attend the classes more with a view to qualify for the competitions than as a means of instruction. We consider that public money should not be expended on the provision of merely nominal instruction for students who are for the most part proficient.

In other counties students must receive at least 20 hours instruction before they qualify to enter the competitions, and in a few counties the course provided is still longer; in Monmouthshire, for example, the courses consist of 5 hours instruction on each of 12 days. We do not think it possible to lay down any hard-and-fast rules as to the amount of instruction which should be given, as this must depend to a great extent on the previous knowledge of the student. The length of instruction must also vary according to the subject taught.

11. In ploughing, thatching, rick-building, and sheep-shearing, the most useful form of instruction is for the County Instructor to visit farms when these processes are being carried on and to demonstrate to the workmen the good and bad points of the work; for instance much good work can be done by the instructor visiting the barns when sheep shearing is in full swing. In this way valuable instruction may be given; but we have been informed that unless previous arrangements are carefully made with the farmer much of the instructor's time may be wasted.‡ When classes are provided in these subjects

* Appendix II. (i).

† Appendix II. (b).

‡ Appendix II. (c).

they should consist of not more than from four to seven pupils, and should be held at convenient centres within easy reach of the students, allowing for not less than 20 hours instruction to be spread over three or four days.

12. Hedging and ditching are processes which agricultural labourers cannot so readily learn as the subjects just dealt with, and the instruction provided should, therefore, be of a more thorough character. The length of instruction should, in our opinion, be not less than three or four days (say 20 hours) and not more than 12 days (say 60 hours), and the classes should not exceed ten pupils. Pupils in these classes are sometimes handicapped through no tools being provided for the purpose, either by the farmers or by the Local Authority, and frequently the pupils attend the classes equipped with insufficient or unsuitable tools. We recommend that Local Authorities should provide tools which can be lent to students while attending the class; this is already being done in some counties.

13. Instruction in the use, care and repair of farm machinery should be provided in every county. Draining is also a subject in which there is great need of instruction in certain districts. Instruction in these subjects, which must be practical as well as theoretical, can best be given by means of classes, which should extend over not less than three or four days.

14. Instruction in milking is provided by some Local Authorities as a part of the regular curriculum of the dairy courses. Provision should be made for holding classes in milking in every county, the importance of cleanliness in all operations connected with the production and handling of milk being specially emphasized. We recommend that travelling dairy schools should include milking as a subject to be dealt with in each course of instruction in dairy work. Instruction in milking and in some other processes should be provided for women as well as men students.

15. Basket-making is in some districts an agricultural process, and technical classes given in the evening are a suitable means of providing instruction in this industry. Instruction in basket-making is also often given at classes primarily devoted to other processes—*e.g.*, thatching.

16. Amongst subjects of instruction rough carpentry should be included. It is a very useful manual process on a farm and could be prepared for by lessons given in elementary schools during school hours, or by means of evening continuation classes.

17. Certain other subjects, such as orchard pruning, farm hygiene, elementary veterinary work such as first-aid to farm stock, and elementary farriery are subjects in which, in our opinion, instruction could also be usefully provided for men employed in agriculture, but as these subjects do not appear to come within the terms of our Reference we have not made any specific recommendations with regard to them.

Competitions.

18. In practically every county in which classes are provided, competitions in most of these processes are held at the end of the course, and such competitions can be made of great educational value. The competitions should be arranged at convenient centres and the Local Committee and the County Agricultural Organiser should endeavour to secure the attendance of all the young farm hands in the district. Strict attention should be paid to the classification of competitors so that youths and inexperienced men are not discouraged by having to compete with older and experienced hands, and the instructor should discuss the good and bad points of the work for the benefit of the competitors and others present. Competitors attach much importance to the possession of a certificate awarded at competitions, and we recommend Local Education Authorities to offer certificates for distribution to the most successful candidates; in order, however, that the certificate shall be regarded as of real value it is necessary that the judges should be instructed not to award the certificates unless a high standard of proficiency is reached. We refer later to the question of the award of money prizes by Local Education Authorities.

19. A large number of competitions in manual processes are held by local societies throughout the country, and, in our opinion, they are of much value in encouraging agricultural labourers to take a pride in their work. With a view to stimulate the efforts of these local societies the Board of Agriculture and Fisheries might consider the desirability of awarding medals for competition.

Cost of the Instruction.

20. In counties in which instruction in manual processes is given, prizes of money are usually awarded by the Local Education Authority at the competitions, and in some cases the expenditure upon these prizes amounts to large sums.

Fees are sometimes paid to the judges at the competitions in addition to their out-of-pocket expenses, and what is termed "attendance money" (*i.e.*, small sums given to students so as to recompense them for any loss of wages which they might otherwise sustain) is also often paid.

When the cost of the above-mentioned items is added to the salary of the instructor and other necessary expenses of the class, the total expenditure on this form of instruction may often be very considerable. It is probable that some Local Authorities have been deterred from providing instruction in manual processes because of the heavy expenditure incurred in other counties for this purpose. For this, and for other reasons, we invite Local Authorities to be more economical and watchful in their expenditure on this head.

21. No difficulty is likely to be experienced in finding competent judges who are willing to undertake the duty if repaid their out-of-pocket expenses and we, therefore, recommend Local Authorities not to sanction the payment of fees to judges. The practice of not paying fees obtains in several counties and numbers of farmers competent to act as judges are pleased to undertake the duties.

22. We have given careful consideration to the question of "attendance money." In most counties the length of the instruction does not at present exceed two to four days, and from the evidence we have received it is clear that farmers have been pleased for their employees to attend the classes without making any deduction from their wages. But if the courses are extended, as we have recommended in paragraphs 10-13, farmers cannot be expected to pay wages to their employees while attending the courses and we are of opinion that, on the whole, the best plan will be for Local Authorities to offer the payment of a small sum to each pupil, such sum not to exceed the amount lost in wages.

23. The question of prizes remains to be considered. While we recognise that the award of money prizes is open to abuse, we are not prepared to recommend that they should be entirely discontinued. We suggest that Local Authorities should take precautions to prevent men already proficient from attending classes in order to win the prizes, and recommend that the value of the prizes given by Local Authorities should be strictly limited in amount, and that the value of the prizes offered should vary in accordance with the thoroughness of the course.

SUMMARY OF RECOMMENDATIONS.

24. With a view to develop skill in workmen employed in agriculture, we recommend that—

- (1) Instruction in certain manual processes of agriculture should be provided for the elder boys and girls attending elementary schools in rural districts. (Paragraph 5.)
- (2) Local Education Authorities and the Managers of rural elementary schools should regulate the holidays so as to leave the boys free to work on the land at a time when their work is most useful. (Paragraph 7.)
- (3) Classes in manual processes for men employed upon the land should be conducted so as to be more in the nature of assistance to, rather than the formal instruction of, those who attend. It is also of the greatest importance that the interest and sympathy of the farmers in this work should be secured.
- (4) Instruction in manual processes for persons employed on the land should be more generally provided by Local Education Authorities throughout England and Wales. (Paragraph 8.)
- (5) The courses of instruction at present provided in most counties should be made more thorough. (Paragraphs 10-16.)
- (6) Local Authorities should offer certificates to be competed for by the students at the end of the class. (Paragraph 18.)
- (7) Local societies which organise classes and competitions in manual processes should be encouraged and assisted by Local Education Authorities. (Paragraph 9.)
- (8) The expenditure of Local Education Authorities on money prizes should be regulated. (Paragraphs 20-23.)

(Signed) HENRY HOBHOUSE,

(Chairman).

22nd May, 1913.

APPENDIX I.

LIST OF WITNESSES.

The Committee examined the following witnesses :—

1. Mr. W. J. Grant, Director of Agricultural Education in Monmouthshire (Member of the Committee).
2. Mr. A. Dean, Assistant Education Officer, Hertfordshire.
3. Mr. J. G. Stewart, M.A., B.Sc., a Superintending Inspector for Agricultural Education in the Board of Agriculture and Fisheries.
4. Mr. Frank Myers, President of the Yorkshire Union of Agricultural Clubs and Chambers of Agriculture.
5. Mr. Thomas Latham, Farmer, Dorchester, Oxon (Member of the Committee).
6. Mr. J. C. Newsham, Principal of the Hampshire Farm School, near Basingstoke.
7. Mr. P. G. Dallinger, B.A., a Superintending Inspector for Agricultural Education in the Board of Agriculture and Fisheries.
8. Mr. C. H. Corbett, Secretary to the Agricultural Education Committee of the Wilts County Council.
9. Mr. George Clark, Secretary of the Berkeley Hunt Agricultural Society, Gloucester.
10. Mr. A. W. Oldershaw, B.Sc., Agricultural Organiser to the East Suffolk Education Committee.
11. Mr. N. R. R. Young, Farmer, of Beckhampton, Marlborough, Wilts.

APPENDIX II.

SUMMARIES OF EVIDENCE.

(a) Mr. Grant.

Mr. Grant is the Director of Agricultural Education in Monmouthshire. He said that manual instruction had been given in Monmouthshire since 1894. At first it was restricted to farmers' sons and young labourers, but afterwards instruction was provided also for the elder boys from the elementary schools. Some difficulty was experienced in arranging for boys and girls from elementary schools to attend lessons in manual subjects ; but since this type of instruction had been recognised by the Board of Education this difficulty has disappeared. Young men who attend the Young Farmers' Classes also take, during two years out of the three, practical work in thatching, hedging, shearing and kindred subjects. The Farmers' Agricultural Associations, of which there were a large number throughout the county, made provision for instruction in ploughing, and for this reason the County Agricultural Education Committee had not deemed it necessary to provide instruction in this subject. He mentioned that it was well known that Monmouthshire farmers gave very good instruction to their sons and farm hands in ploughing, and a keen rivalry existed as to who should carry off the prizes.

Mr. Grant said that, at first, two or three hedging instructors were appointed in various parts of the county. After a few years' trial it was found more desirable to appoint an expert permanently who understood the system of hedging required on the hillside farms and also for those on the lower lands.

It was rather difficult to find men suitable to fill the post of instructor as hedging had almost become a lost art in Monmouthshire. Asked why this was so, Mr. Grant said that it was the result of the young men getting employment in collieries or towns in preference to remaining on the land, so that when the older men died there were no young ones to take their place. At the present time there were plenty of promising young men, but previously it was not easy to find a really expert hedger at the time he was required. The classes in this subject are held about 10 times in a year, and each lasts for 12 days. The plan adopted is to take from six to ten young men or lads from school and instruct them in pleaching and laying a hedge, ditching and banking, no entrance fee being charged. Each pupil has to deal with not less than two perches. At the conclusion of each set of classes the work is judged by two practical farmers, prizes and certificates being

given. Twenty marks are awarded in all :—ten for the shape of the hedge, five for the pleachers, three for the banking and two for staking. Mr. Grant said that in Monmouthshire and Herefordshire hedging was of importance in consequence of the large amount of grazing carried on. The hedges were allowed to grow for a number of years to provide shelter for the stock, and also for the purpose of obtaining sufficient material for repairing purposes. Farmers found it difficult to obtain men who, in addition to being competent hedgers, were also capable of doing the all round work on a farm. In answer to a member of the Committee, Mr. Grant said that such a man would have no difficulty in earning from 20s. to 25s. per week. The wages of an ordinary agricultural labourer were, in the Newport district about 3s. per day, and on the further side of the county 14s. or 15s. per week with cottage and milk. Mr. Grant was asked at what ages the boys were taken to be taught hedging. He replied that instruction was sometimes given to boys of 12, but that was too young to make a start ; it was customary to start teaching as soon as the boys were strong enough to handle the necessary tools without difficulty. The classes usually commenced at 10 o'clock and finished at 3 o'clock. This was found to be the most convenient because the boys could report themselves at school both before and after the classes, while the young men had time to do any work necessary at home or on the farm where they were employed. There were about an equal number of boys and young men in the classes, but many more boys could be got from the schools if the instructor had sufficient time in the season to take them. Mr. Grant said that the farmers in Monmouthshire were very well pleased for their young men to attend the classes, and he did not know of one case where any wages had been deducted on account of the labourer's absence from the farm. The age at which their boys left the elementary school was 14, and in their first year they were considered worth about 5s. per week and their keep. As a rule it was found that boys who had attended the classes were worth about £5 a year more than those who had not. In reply to questions Mr. Grant said that the hedging instructor, whose salary was 30s. per week was a very capable man and could, if necessary, give lessons in basketmaking, ploughing, thatching and mowing with scythe, in fact all the members of the County Agricultural Staff were all-round agriculturists in addition to being experts in their own particular subjects. He said that the judging in competitions was done by practical farmers. If they came from a distance their travelling expenses were defrayed, but otherwise no payment was made, and the farmers were pleased to give their services in consequence of the interest they took in the work. A question was asked as to whether blackthorn, whitethorn or hazel hedges were grown chiefly in Monmouthshire. Mr. Grant said that mixed fences containing all three were in existence in every district. A lad usually started with the easier types of hedge and gradually worked up until he was able to deal with the most difficult thorn hedge, ditch and bank.

Mr. Grant said that sheep-shearing instruction usually began during the first week in June, and as the period during which this operation could be performed was limited the time allowed for tuition was three days at each centre. It was customary to get as much work done each day as possible, usually from six to eight hours ; but this depended upon how far the instructor had to travel and the number attending for instruction. The classes were attended by school boys from 14 years of age and young men up to 25. The usual number of sheep a student was expected to shear for instruction was from six to twelve, but for examination purposes it was three. The instruction was given free and £3 in prizes were awarded at each centre. Any entry fees that might be charged went to defraying the cost of providing sheep, &c.

During the last ten years the instructor has taught the following number of students :—

1903	...	...	60	1908	...	...	92
1904	...	...	107	1909	...	...	103
1905	...	...	128	1910	...	...	116
1906	...	...	116	1911	...	...	119
1907	...	...	97	1912	...	...	122
Total				...	...	...	1,060

The difficulty in Monmouthshire was that in addition to the ordinary shearing of lowland sheep the shearers had to learn to shear mountain sheep so as to leave a ridge to allow the rain to run off. No shearer was considered proficient who could not shear both types of sheep, so that he would be equally efficient in the work in all parts of the county. Mr. Grant said that they had found that a boy of 14 could shear the smaller sheep with success. In reply to a member of the Committee, Mr. Grant said that instruction

was given in rolling and packing the fleece, and that importance was attached to this section of the work in giving prizes. The marks are awarded as follows :—Shearing 10, freedom from cuts 2, rolling the fleece 2, time 6, in all 20. The shearing instructor is paid £1 per day and his travelling and out of pocket expenses are defrayed.

Mr. Grant next spoke of milking. This subject is made compulsory at the Cheese and Dairy Schools, but boys could not be got from the elementary school to take up milking to any great extent, and the girls not at all. He realised that starting to milk early in life was very desirable, but in addition to the difficulty of getting children out of the schools there was the fact that farmers were not willing to allow their cows to be practised upon by beginners. It was found, however, that the pupils who did attend the classes usually kept on with the subject and were very successful in obtaining good posts. Milking competitions have been held for some years, the scale of points being :—Time 10 marks, science 15, cleanliness 25, giving a total of 50 marks. Monmouthshire students have won many first prizes outside the county, both at the Bath and West and London Dairy Shows. The following table handed in by Mr. Grant shows the number of candidates who have entered for milking competitions since 1900 :—

Year.	Men over 18.	Women over 18.	Boys and Girls Under 18.	Total.
1900	8	4	7	19
1901	10	7	5	22
1902	10	8	11	29
1903	11	7	16	34
1904	10	4	7	21
1905	8	5	9	22
1906	14	5	13	32
1907	13	7	13	33
1908	12	6	15	33
1909	12	7	14	33
1910	14	10	10	34
1911	5	6	6	17
1912	15	12	14	41

Mr. Grant informed the meeting that basket-making in Monmouthshire is confined to the making of what are termed Truck or Coracle baskets, these being used for the purpose of carrying fruit or roots. The classes held in this subject are attended by students who have received instruction in hedging. He said that there was plenty of work to be done, and that the demand for the baskets made at the classes was always greater than the supply. It was customary to use hazel rods, which can be found on almost every farm in the county, instead of willow, so that young men would experience no difficulty afterwards in obtaining suitable material.

With regard to thatching Mr. Grant said that no instruction was provided. Great interest was taken by the farmers in this subject, and it was found that they were able to instruct their sons and employees quite adequately, both in the making and thatching of stacks. It was customary for beginners to learn to load a waggon properly before proceeding to work upon stacks. He said that the ricks were inspected from time to time, during the time the thatching was being done, by the members of his staff, who pointed out mistakes or made suggestions. The scale of points was, spars 5, evenness 5, roof 10, eaves 5, total 25.

Mr. Grant was of opinion that the more practical this kind of instruction could be made the more it would be appreciated by those dependent upon the soil for their livelihood. In Monmouthshire the expenditure on Agricultural Education had risen from £1,000 to £2,160. He said that he had experienced no difficulty in getting the Education Committee to vote funds, every budget prepared by him had been passed without opposition. Mr. Grant said that he kept in close touch with the Farmers' Associations throughout the county, but that the County Agricultural Education Committee did not arrange any classes directly through the Associations neither did they pay them grants. He was asked how far the central office worked through the Local Committees, and said that all applications for instruction, advice and assistance had to be made direct to him, but that all the necessary arrangements, with the exception of purely local arrangements such as finding a hedge, sheep, &c., would be arranged for by the Agricultural Department. Mr. Grant said that in Monmouthshire there was an excellent feeling between the farmers and the county staff and the former would always prefer men who had taken courses of instruction in addition to having gained a thorough practical knowledge by personal experience on a farm.

(b) Mr. Dean.

Mr. Dean is Assistant Education Officer to the Hertfordshire County Council, and has filled this post for 20 years. He formerly occupied the position of Organising Secretary of the old Technical Instruction Committee.

Mr. Dean said that in 1893, ploughing competitions were arranged by the Hertfordshire Agricultural Society, the prizes being awarded by the County Council out of grants received under the Local Taxation (Customs and Excise) Act, 1890. During the following year or two, other subjects, including hedging and ditching, stacking and thatching, were added. In 1896 control of the work was taken over by a Sub-Committee appointed by the County Technical Instruction Committee, and during the Session 1896-7 competitions were held in ploughing, hedging and ditching, stacking and thatching, and land-draining, the total number of entries being 191. At this period no instruction was given before the competitions, but it was customary for the judges to inform the men as to the points which would be considered most important in making the awards.

Eventually the Local Government Auditor, Mr. T. K. Roberts (who at the time was the Senior Auditor of the Board), as a test case, threatened to surcharge the Members of the Agricultural Sub-Committee for payment of the whole of the prize money for Manual Process Subjects. As Organising Secretary Mr. Dean advised the Technical Instruction Committee to continue the method in force, until an Order relating to this was issued by the Science and Art Department. In November, 1900, an Order was issued by the District Auditor of the Local Government Board, supported by the Department of Science and Art, to the effect that "Before prizes for manual dexterity in various agricultural subjects are awarded, it is essential that there should be full and proper class instruction in each subject apart from the competition." No further indication was given as to the meaning of "full and proper instruction," the authorities being left to interpret the words in their own way. One County offered 8 hours in each subject, another offered 20 hours, whilst Hertfordshire offered five hours, three attendances being necessary to qualify for prizes. For the past ten years, and in the present Scheme, two hours given on separate days, out of three hours offered, is necessary for qualification. The Local Government Auditor has never questioned the duration of the instruction given.

As stated above, for the past ten years the Scheme has provided for one hour's instruction being given on three days, attendance on two days being necessary before the men can enter for any competition. Mr. Dean was asked whether, in his opinion, two hours' instruction in a subject was of much value. He said that he thought that it was, and he emphasised the fact that instruction was not given to novices but to men who already possessed a working knowledge of the subject in which they were to receive tuition.

Mr. Dean was of opinion that the prizes were necessary to induce men to take an interest in the instruction, and he thought that the greater number of the men entered for the instruction in order to qualify to compete for the prizes. He said that four prizes are now awarded in each class, those for the men being £1, 15s., 10s. and 5s., and for the boys 15s., 11s. 3d., 7s. 6d. and 3s. 9d. Each unsuccessful competitor in the men's classes receives 2s. 6d., and in the boys' classes 2s. for his expenses in attending. In 1910-11 the total cost of the instruction and judging at the competitions was £461, and the prizes amounted to £322, while in 1911-12 these items cost £386 and £189, respectively.

Describing the method by which instruction is organised, Mr. Dean said that there were seven centres in the county and that when several applications for instruction had been received at one of these centres an expert would visit that district and give the requisite teaching in any of the seven subjects offered, viz., ploughing, hedging and ditching, land-draining, milking, stacking, thatching, and harvesting with binder. The practice was for the instructor to visit each farm twice on separate days and to give two lessons, each of one hour's duration, to the men while engaged in their ordinary work; in this way the teaching was given without the men losing any time. In reply to questions as to the procedure adopted in teaching milking, Mr. Dean said that usually the student milked and the instructor pointed out any faults that he observed in his methods. Mr. Dean said that he had not heard of any complaints from farmers that this system necessitated their cows being milked by novices as the students instructed in this way had all milked before. In the case of ploughing he said that five was the maximum number of pupils taught by the instructor at one lesson.

Mr. Dean said that hitherto instruction had been given to all men and boys desiring to compete, but it had proved too expensive and in the future it was proposed to limit the teaching to youths under 20 years of age, though men of over 20 would still be free to enter for the competitions. This method had yet to be tried, and nothing could be said at present about its success.

With regard to the instruction of children in manual agricultural processes, he said that the Hertfordshire County Council were not able, under the Code, to give such teaching to children in elementary schools. He was of opinion that instruction during their school life would be of great assistance afterwards, but the only way this teaching could be given in Hertfordshire was by evening schools. Asked whether he approved of instruction being given during the holidays in manual processes, Mr. Dean replied that it would be very helpful, but that he doubted whether the teachers and pupils could be got together for the purpose. He gave an example, however, of a teacher who had given instruction in this way to three children, with such good results that they would have taken prizes had they been eligible. He thought it was desirable to get the children early, in order to accustom them to the conditions of life and work in the country. The age of leaving school was 14, or, if the child obtained the exemption certificate, 13, after which age the boys were able to receive instruction in the ordinary way. Mr. Dean realised that the great disadvantage of agricultural instruction given in evening classes was that it was necessarily theoretical, the practical side being left untouched, but he thought this difficulty could eventually be overcome.

Mr. Dean informed the meeting that the normal wage of an agricultural labourer in Hertfordshire was from 13s. to 17s. and a cottage free. The farmers greatly appreciated the value of the instruction and competitions, and he gave three examples of men who, after winning prizes in competitions, had obtained posts as foremen, thus increasing their wages from about 15s. to 21s. a week and house free. It was suggested that these were isolated examples, and that three men who had benefited financially out of several hundreds instructed was not a high percentage. Mr. Dean replied that not many changes of foremen were made, but the farmers showed a preference for men holding the certificates, which are awarded to those taking first and second places in each competition, in addition to the prizes. In answer to a question Mr. Dean said that as regards thatching, piece-work and day-work were both in operation in Hertfordshire, some farmers adopting one system and some the other.

(c) **Mr. Stewart.**

Mr. Stewart is a Superintending Inspector of the Board of Agriculture and Fisheries. He informed the Committee that his district of inspection lay in the Midlands and East of England, and that he was acquainted with the conditions under which manual instruction is given in Huntingdonshire, Hertfordshire, and East Suffolk.

Mr. Stewart said that in the two counties first mentioned it was customary to hold competitions in farriery, ploughing, hedging, and similar farm processes, and it was compulsory that men should receive instruction previous to entering their names as competitors. The whole system was, however, in his opinion extremely unsatisfactory, and to illustrate this point he described the method of holding competitions and giving instruction adopted in Huntingdonshire. In this county, when it is considered desirable to hold a competition, a local Committee, consisting of representatives from a number of adjacent Parish Councils, is formed. To this Committee the necessary funds are allotted by the Agricultural Sub-Committee to be used partly in providing instruction and partly in awarding prizes at the competition. The instruction is usually provided at two centres within the area and attendance at one at least of these demonstrations is necessary in order to qualify for admission to the list of competitors. The instructor is present at the centre fixed for the demonstration usually from 10 a.m. to 3 p.m.; he does all the work, the would-be competitors merely looking on and taking practically no interest in the demonstration except for the fact that it enables them to enter for the competition. The men may attend the demonstration at any time convenient to them, and they are not required to remain for any specified time. Mr. Stewart then described competitions in hedging and ploughing, attended by him, in which seven Huntingdonshire parishes were co-operating. The demonstrations were, as usual, held on two days, but although he visited the centre on both days, remaining for over an hour on each occasion, he never saw more than one man present. On enquiry he learned that of 35 men and youths who took part in the subsequent competitions, none had attended more than one demonstration, and they had merely viewed the work done by the instructor, making no attempt to obtain information on the subject of instruction. In three cases at least, men, entered for hedge-laying, had reached the centre whilst the instructor was engaged in hedge-trimming, thus they saw no actual hedge-laying. In other cases the men confessed to having reached the demonstration centre after the instructor had gone. No objections were raised, in any of the cases cited, by those who took the names of the competitors, and it was apparently considered that the conditions attaching to the grant of £20, to be paid in respect of the instruction and competition,

were fully complied with. The result of this inefficient organisation was that both farmers and workmen considered that, though the competitions were desirable and served a useful purpose, the instruction as given at present was absolutely worthless. They were all of opinion that the Regulation, which stipulates that all competitors must attend the demonstrations, should be abolished, since it resulted in no advantage to the men and frequently prevented from competing those who might otherwise have done so. Each of the instructors gets 30s. for the two demonstrations, and they are both efficient workmen.

Mr. Stewart was of opinion that much good could be done if this type of instruction were properly organised, but it was possible to spend a large amount of money on classes and competitions without making much headway. He gave Hertfordshire as an example. In this county, the instructor visits practically each individual farm. At one farm the instructor may teach men who are not in need of tuition, and at the next farm visited by him he may find that the men cannot be spared from their ordinary work ; in this way much of the time of the instructor is wasted. Mr. Stewart pointed out that this was the result of inefficient organisation and lack of appreciation on the part of the farmer with respect to the character of the instruction, and for these reasons he held that the work should be organised by the County Agricultural Instructor rather than by the County Education Secretary. He thought that the interest and co-operation of farmers, which were essential if this form of education was to be successful, would thereby be better secured. He said that as far as he was aware, there were no ploughing societies in East Suffolk, Huntingdonshire or Hertfordshire, and agreed that if such societies were formed they would largely obviate the need of arranging special classes and competitions in ploughing. He said that the farmers varied a great deal as regards taking an interest in the instruction of their men, some encouraged them to take advantage of such instruction as was available, while others considered it a waste of time. Some of the farmers gave their employees practical tuition which was of great value ; but on the other hand there were many who were not qualified to impart any teaching at all to their employees, and the younger workmen were apt to resent being instructed by their elder fellow workmen on the farm. In reply to a member of the Committee, Mr. Stewart said that he had not heard of any specific cases where the men's wages had been increased as a result of the instruction they had received, but he had heard the opinion expressed from time to time by farmers that the work of their labourers had been done better since they had attended the classes. He believed that if a man acquired skill in some particular industry of which he had previously been more or less ignorant, he would be able to command a higher wage.

Mr. Stewart thought that the best arranged classes in his district were those in hedging in East Suffolk. The method of hedging adopted in East Suffolk by the instructor is similar to that of the Midlands. There the hedge is allowed to grow to a height of some 15 feet ; it is then laid and is subsequently trimmed annually. When it begins to get weak at the bottom it is allowed to grow until good "layers" can again be obtained. Six pupils usually form a class and the instruction extends over two or three days ; no competition is held. The instructor is paid 45s. per week and his travelling expenses are defrayed.

It was pointed out by Mr. Stewart that much money is wasted on the provision of instruction and competitions for men who are already efficient. No exemption from instruction is allowed to those who are already skilled workmen and who have taken prizes at previous competitions, they enter their names as competitors and are obliged by the Regulations to take instruction in the same way as beginners. They do not, however, compete in the same class as the beginners. In the case of one ploughing contest in Huntingdonshire, only three out of 15 competitors were under 22 years of age, and most of the men had been prizemen on several previous occasions. In the hedge-laying competition all the seven competitors were veterans, all but one having competed before, and in the hedge-trimming competition open to those over 25 years of age all but two had taken part on previous occasions. Mr. Stewart had not found it possible to visit the farriery competition, but it appeared that 35 men competed for prizes in five classes and that only two of these competitors were under 21 years of age. Moreover the competitors in two of the classes were former 1st prize men. He was of opinion that it was not necessary to pay fees to the judges in competitions. The judging is usually done by farmers possessing a thoroughly practical knowledge of the work which they are examining, and as they are usually dependent upon the land for their living they thus reap the benefit of the instruction and competitions in the form of increased efficiency on the part of their workmen. On this account he thought that if their interest could be aroused they would be quite willing to give their services as judges, their out-of-pocket expenses being found by the Education Authority.

Mr. Stewart was of opinion that steps should be taken to make the competitions and instruction of greater value to the young men and boys. The instructor should arrange as far as possible for the attendance at competitions of all the farm lads in the district and should there demonstrate to them the good and bad points of the work. He thought that the boys should receive instruction as soon as they left school, which was usually at the age of 14; and that there should be a minimum age limit, perhaps 14, but that no maximum limit ought to be fixed, since it was common to find men of 25 and over who had never received instruction in such a necessary subject, for instance, as hedging. It was desirable that instruction in manual subjects should be given to the boys when they were between the ages of 14 and 20. Mr. Stewart said that it was essential that the farmers and their employees should be encouraged as far as possible to take an interest in instruction as distinct from the competitions. In order to achieve this object it would be necessary to make the classes of greater practical utility to those who attended them. A man could not learn hedging, for example, in two lessons of one hour each, and the classes for beginners should extend over a week or ten days. The agricultural instructor should get into personal contact with the farmers and their employees and encourage them to take an interest in the instruction. Efforts should be made, also, to get the farmers to co-operate with the Local Education Authority in making arrangements for demonstrations and competitions, otherwise much valuable time was wasted. Mr. Stewart was of opinion that competitions were of considerable educational value and was in favour of seniors competing as a means of stimulating a spirit of emulation in the younger workmen, but he thought that the prizes for the senior classes should be contributed from sources other than the funds of the Education Authority. He was also of opinion that tools might very suitably be given as prizes in the competitions instead of money; in hedging, particularly, he had found that very few of the men possessed the requisite tools, and considerable difficulty was thus experienced at the classes and competitions. Mr. Stewart was asked whether the lack of interest in the instruction on the part of the men and youths was possibly due to the fact that they lost their wages by attending the classes. He was under the impression that their apathy could not be attributed to this cause, and it was his belief that most of the farmers paid the usual wages to such of their employees as were absent on this account. In Hertfordshire special arrangements were made by the County Council for allowing the men their usual rates of pay during the period when they were receiving instruction. In answer to a question, Mr. Stewart said that he occasionally made suggestions for the improvement of the instruction in his district. In Huntingdon, these suggestions were approved, but had not yet been carried into effect, and in Hertfordshire the estimates for this type of work had been considerably curtailed without loss of efficiency. A very good instructor had recently been appointed but it was as yet too early to express an opinion on the results of his work.

(d) **Mr. Myers.**

Mr. Myers is a Tenant Farmer and President of the Yorkshire Union of Agricultural Clubs and Chambers of Agriculture, comprising 27 Clubs and Chambers with a total membership of about 5,000.

He said that in Yorkshire considerable difficulty was experienced in getting lads to take up agriculture as a means of earning a living, and there was a great tendency on their part to seek employment in the towns. The two chief reasons for this state of affairs were the higher wages paid in the towns and the difficulty experienced by men in founding homes for themselves in the country. In Yorkshire the importance of providing cottages for labourers had not always been realised, with the result that many young men left the land just as they were becoming useful. Mr. Myers thought that more attention should be given to this point and that boys should at an early stage be encouraged to take an interest in agricultural work with a view to their remaining in the country. Mr. Myers said that in Yorkshire the system of hiring found great favour. Unmarried men are usually hired for a year, and lads are taught their work under the supervision of masters and foremen. This system was found to be the best for giving boys a knowledge of manual pursuits, and as no instruction was provided by the Local Education Authority it was necessary that the tuition should be given by the farmers themselves.

Mr. Myers thought that ploughing was learnt in a satisfactory manner, and a considerable improvement had taken place during the past few years. He had found that boys who were fond of horses were always willing in their spare time to watch and, if possible, assist the ploughmen, and in this way they gained much useful knowledge. It was found that some men had a special aptitude for learning the art of ploughing and that others, on the contrary, would never make good ploughmen. A man who could not set a plough properly would never be successful at ploughing. He said that the lads on his farm usually

started to learn ploughing at about the age of 12 years; he himself received his first practical instruction in this subject when twelve years of age. He was afraid that hedging had been very much neglected in the past, but an improvement had been effected recently. A few hedging competitions had been held and these had served to show the weak points. In the Marston Moor district the hedges had been very badly kept, but prizes were given by gentlemen hunting with the Bramham Moor and York and Ainsty foxhounds, and in consequence the hedges are now in a better state of repair. He thought that there was room for further progress in hedging, the difficulty lay to a large extent with the men, many of whom had a distaste for hedging work. The proper care of hedges, however, was largely a hunting question. Ditching was another subject to which little attention had been given. Up to last year there had been a succession of dry seasons and farmers had been apt on that account to neglect keeping their ditches in good order; consequently there was a good deal of flooding as the result of last year's heavy rainfall. Mr. Myers expressed the opinion, however, that ditching did not call for any very special knowledge, and that most workmen were competent to do any ditching required on an ordinary farm. Mr. Myers, whose experience of milking extended over 20 years, said that there was a considerable difficulty in getting young men to milk; the milk business in his district was known as the "Slave-trade" and in his opinion there was some justice in the title. The chief cause of the workmen's dislike of the milk business was Sunday work. His own men realised that Sunday work was necessary and agreed to do it, but he knew that many farmers had experienced a good deal of trouble in this way. Milking was not, however, the chief industry of the district. It was the practice to teach boys milking before other forms of manual work, because they were often able to milk before they were strong enough to do other work. In answer to a question, Mr. Myers said that he had seen experiments with milking by machinery, but he was of opinion that the apparatus was too expensive to be adopted to any large extent. He thought it desirable, however, that men should have a knowledge of the working and construction of agricultural machines in common use, such as binders, and his impression was that more interest was now being taken in this question than previously. As regards sheep shearing, he said that this was not practised to any large extent in his part of the country, as not very many sheep were kept and, moreover, a good many farmers did their shearing by machinery. Mr. Myers said that insufficient attention was given to thatching and rick building, not one man out of ten could build a rick and thatch it really well.

In his opinion the boys did not start to learn farm pursuits early enough. He had found that whilst still at school they were always willing in their spare time to go with the men and join in the work, and he thought that if greater advantage were taken of this opportunity of educating the boys they would be more inclined to take up agricultural work and remain in the country. He agreed that it might be very advantageous if children could be allowed out of school occasionally during their last two years of attendance to receive manual instruction in agriculture on farms, but he did not think that theoretical instruction given in the elementary school would serve any useful purpose. The children sometimes leave school at the age of 14, but the parents are frequently willing for them to stay for a year or two longer. Boys are usually worth from £8 to £10 in their first year. In reply to questions, Mr. Myers admitted that the majority of Yorkshire farmers did not take as much interest in the effective instruction of their employees as he thought necessary. He said that in his official capacity he came into touch with farmers from all three Ridings and he thought that 9 out of 10 could not give their lads practical tuition in cutting and laying hedges. Half the farmers in his district could not cut a hedge properly, but on the other hand most of them could give good instruction in ploughing. Mr. Myers thought that much good might be done if the Local Education Authority could arrange for peripatetic lectures to be given on some of the leading subjects, and it would be an advantage to hold competitions in order to stimulate interest. He thought that such instruction would receive the support of Yorkshire farmers, but was unable to say whether there was at present any actual demand for it. Some difficulty would, doubtless, be experienced in securing the organisation and co-operation of the farmers and in getting the boys to attend classes, but he thought that when once this was overcome the instruction would be of the greatest help in improving agricultural methods in Yorkshire.

(e) **Mr. Latham.**

Mr. Latham farms some 1,100 acres at Dorchester in Oxfordshire and Little Wittenham in Berkshire. He feels that it is a farmer's duty to give to his employees all

the instruction he can in manual agricultural processes. Mr. Latham himself gives instruction to his men and boys, and with the view of describing his methods to the Committee he read the following statement :—

I would like my evidence to be an exposition of the system I have adopted all through my life. In my early days I made myself conversant with the general routine of the whole of labour management and the various ordeals of labour necessary for the working of the farm, taking part in almost all of the several departments. I will begin at the beginning.

Boys.—I am always willing to take any of the boys willing to come to me directly they leave school and often have more than I can profitably employ.

1st.—They are put with the horses always an attraction to boys. They come very willingly in their holidays, if in the harvest, to ride one of the horses with the binders, drive the hay or harvest carts, water the horses at meal times and see the horses are fed at meal times.

2nd.—They use our self-acting rakes and as they get older, drive our teams. We use wide horse hoes and drills and all sorts of implements. They go with odd carts to the station, taking out and bringing in produce, they pick up turnips, mind birds without guns off the planted corn and are given every facility to get fond of their employment, and before long get very useful, and take a great interest in their employment. One especial point I try to give them is to make agricultural employment their first start. I am never short of boys, as they get older they are moved on to help cattle men, shepherds, and other general work.

Lads.—I very seldom have a lad that has not been with me as a boy ; so as soon as they can I put them to plough with a man that can teach them the rudiments of the work they are engaged in, giving them especial attention myself. My lads plough well and soon get to be able to manage the ploughs completely, begin and finish the lands ; and often my lads under 16 can drive three horses with reins on single and double ploughs. My contention is that masters should be able to teach their employees the work they expect and wish them to do.

These remarks apply to the cattlemen and shepherds.

My young lads about 16 to 18 always drive my steerage drills and sometimes follow the drill and do the horse hoeing, a considerable employment, and I find them very useful in taking apart and putting together machinery, having seen the older employees do it.

I keep a blacksmith and a carpenter, and always have a lad working with them, and find they soon get very useful.

I often have some of these lads in the garden, and they soon take a great interest in the work.

Men.—These are the employees previously spoken of. I keep my men very well and now have four generations working for me in a family, and almost all my men are proficient in the whole of my occupations.

Ploughmen.—These are all the foregoing. From the time they leave school, as I have described, they are well looked after, and corrected if wrong by myself. My best men use double ploughs and win at ploughing matches, which is the best result of the evidence I am giving. I take a great pride in seeing all the ploughs are properly set and do the work well, if wrong, making the ploughman alter the plough himself ; of course this reverts back to my previous evidence.

Shearing.—My man shears his own sheep and we allow the young men and lads to come in the evening to help him. If they get any remuneration the head man pays them. We often have a full side and it is in this way they learn the work ; they soon learn to try to do it well, always having the head man's eye on them.

Hedging.—I keep several good hedgers and keep young men at work with them to learn the work.

Thatching.—I can produce about eight good agricultural thatchers, working two men together, and the helper often gets to be thatcher from the experience gained by watching the older man. It is a favourite occupation with us. One of these men can thatch well enough to thatch buildings.

Rick-builders.—I have any number of rick builders and they get their education from first loading the corn and hay in the harvest fields and after a very little trouble we get our ricks built well. Of course this is an occupation and employment that makes men proud of themselves if done well, and is always a mark for them from harvest to harvest.

Shepherds, Cattlemen and Horsekeepers.—These are all employees who get their education from their seniors, often from father to son. The master's assistance should be of considerable value to them and a close inspection is absolutely necessary with these men, not showing the master's ignorance in these matters.

Hay and straw tiers.—I have any quantity of these quite self-taught under my guidance and supervision.

Buttermen.—I have an excellent man taught by myself. Possibly my experience is more than most masters in this branch of Agriculture.

Milkers.—The same remarks apply.

General Labour.—All this is done by men that have been with me since school days. I seldom have a new hand and have many that never had another master.

Turnip hoeing.—I take a great pride in this and we have it done most excellently.

Harvest work.—Done excellently. I pay great attention to shocking the corn.

Corn delivery.—Requires especial care ; my men are well up to this work.

Mr. Latham regards it of the greatest importance that boys should go on farms and begin to learn agricultural work as soon as they leave school. In this way they get a liking for farm work and there is less likelihood of them entering other walks of life. He said that in his part of the country farmers did not suffer much from the competition of adjacent towns in the matter of labour. Boys were willing to go on farms during their school holidays and work with the men. He always paid them for their work, and

found that they were pleased at being wage-earners and did their best to acquire a good knowledge of the farm work.

Mr. Latham was asked whether it was not very difficult for a man farming 1,100 acres to find time to teach his employees their work. He said that he had for a period of many years been engaged in public work, and still found time to superintend his farm and give instruction to his men. He thought that the question of having adequate accommodation for the men on or near the farm where they worked was a very important factor in keeping them from moving into the towns. At one time he had as many as 46 cottages for his labourers; now he had not quite so many, having given up one farm, but he was always able to provide for them. He made it a rule that each man should have, for his own use, a rood of land with his cottage. The cottages usually consist of three rooms upstairs, and the rent is about 1s. 6d. per week. He agreed that a plentiful supply of cottages was of great advantage to agriculture generally, and thought that the system under which a farmer lets cottages to his own men works quite satisfactorily.

Mr. Latham said that instruction by the farmer himself or by his foreman was undoubtedly the most valuable form of teaching; the men learned the work more readily from their master than from an outside instructor, moreover the tuition given in this way was continuous and therefore its effects were lasting. He agreed, however, that not more than one-half of the farmers were qualified to give practical teaching in manual subjects to their employees. In cases where the men could not learn from their masters Mr. Latham thought that instruction should be given by some outside authority. He said that an Agricultural Organiser should go round from field to field and see how the work was being done; if the farmer was instructing his men properly no steps need be taken, but in cases where the men were insufficiently taught a centre should be formed and classes held in the necessary subjects by a competent instructor. In his opinion competitions served a useful purpose inasmuch as they stimulated the interest of the men in the classes, but unless thorough instruction were given previously it was waste of time to hold competitions. He did not think that any difficulty was found in getting judges for the competitions in his county, as farmers were interested in the work. He had acted as judge in ploughing competitions for many years, but had never made any charge for his services.

Mr. Latham said that in his part of the country instruction in farriery was given by means of a travelling van. Lectures and demonstrations on the horse's foot were given by a veterinary surgeon at the larger villages, and were attended by men from the surrounding districts. In the course of his experience in various parts of the country he had found that an astonishing ignorance with regard to the horse's foot prevailed, even amongst blacksmiths, many of whom before this teaching was started made the hoof fit a ready-made shoe, instead of making the shoe to fit the hoof. He said that the Oxfordshire Agricultural Adviser was a member of the Staff of the University College, Reading, and was doing excellent work and was very popular with agriculturists in the county. In reply to a question he said that he had never heard of a case in which a farmer had stopped a man's wages because he attended competitions; as a rule farmers were very pleased for the workmen to compete, and proud if they won prizes. Mr. Latham was in favour of manual instruction being given in elementary schools and he thought that school gardens might be made to serve a very useful purpose. It was often found that a boy who was backward in ordinary school subjects and was wasting his own time and that of his fellows would make great progress if shown how to use his hands as well as his brain. Mr. Latham was in favour of any scheme which admitted of the boys being allowed out of school for the purpose of receiving practical instruction on the farm. As regards milking, he did not see why a boy should injure a cow in learning to milk, provided the instructor watched him and pointed out his faults. He also referred to the importance in the case of emergency of farmers and others knowing how to treat animals before the arrival of the veterinary surgeon.

In reply to a member of the Committee Mr. Latham said that the system of hiring men for fixed terms is still practised in his neighbourhood. The usual term is a year from 11th October but the practice of hiring at fairs is rapidly dying out, almost all such transactions being now done by advertisements.

(f) Mr. Newsham.

Mr. Newsham is Principal of the Hampshire Farm School, near Basingstoke.

He said that the curriculum of the School includes instruction and practice in the manual processes of ploughing, hedging, ditching, thatching and milking, but the

extensive nature of the Syllabus does not admit of a large amount of time being devoted to any one of these subjects, and to obtain a more practical knowledge of them necessitates visits being made to neighbouring farms by the Headmaster and pupils. All students take the full curriculum and are not as a rule allowed to specialise in any particular subject.

The Winter course consists of 24 weeks, 12 weeks before and 12 after Christmas. The Summer course lasts 15 weeks. Provision is also made for students wishing to continue their studies for 12 months without interruption, the necessary arrangements being made for providing them with suitable lodgings near the School; no fees are charged for the period when the School is not in session, but the students are required to pay their own living expenses. The age of the majority of the pupils is from 15 to 17 years. Mr. Newsham was questioned as to the class of student attending the Farm School, and said that a large percentage of the boys had received a Secondary School education. Last year about 90 per cent. of the pupils were sons of tenant farmers or small-holders, while during the present session there had been an increase of students from town areas; no boys of the labouring class attended the School; this, however, was due to their own lack of desire to receive tuition and not to any restrictions on the part of the Farm School Committee. The instruction given at the School had, however, a bearing on the Committee's Reference, as farmers' sons after leaving the School were better fitted to teach their labourers than they would otherwise be.

Mr. Newsham described the instruction given at the School in various subjects. The ploughing is done on the School farm. Students are made familiar with the parts comprising an ordinary plough and are given opportunities of examining the various types of ploughs manufactured and used in the locality. The practice of ploughing is taught in the field together with the reasons for modifying the width and depth of the furrow, and students accompanied by the Agricultural Instructor attend ploughing competitions held in the district. At these instruction is usually given by a champion ploughman. Were it possible, however, more practice might be afforded at the School in the use of ploughs of different types suitable for varying soil conditions, but this would entail setting apart a small area of ground for demonstrations, and which also might well be used for demonstrating the use of other implements of tillage in connexion with class instruction.

A limited amount of time is devoted to the subject of hedge-making, and special instruction has been given on the farm, but a lack of suitable hedges for laying has necessitated the students being taken further afield in order to obtain the necessary amount of practical knowledge of the subject. Hedge-making competitions are held from time to time in the surrounding district, and students are given an opportunity of comparing newly-laid hedges with those that have been laid for ten or more years. Students of the Farm School type can perform useful work on young thorn hedges, but they have not the strength or the necessary experience to deal with hedges of mixed wood and mature growth. Classes are held in the county in hedging called "Novice Classes," the object of which is to give beginners an elementary knowledge of hedge-laying and trimming. Mr. Newsham thought that the best instructor of hedging was a man actually engaged in the work; he himself had some practical experience of the subject and had acted as judge in various competitions, but he would not consider himself qualified to teach hedging in the same way as a man engaged in this pursuit. Mr. Newsham pointed out, however, that the men who perform manual processes the best are rarely capable of giving instruction, their knowledge being limited to the practices of the district with which they are familiar, and, what is of more importance, they are unable to give a satisfactory reason for this or that operation. On the other hand his experience had been that instructors who possess only a theoretical knowledge of their subjects, fail utterly to elicit the sympathy of the farmer, the student, or the labourer. If the county instructor is himself a practical farmer he may then claim the attention of the farmer or the labourer, and forcibly impress those important points underlying any practical operation.

Instruction in ditching is only given at the School so far as it is concerned with the draining of land and the keeping open of all outlets so that there is no stoppage of water in the pipes. Apart from the opening of water-furrows and the scouring of ditches in winter, no special instruction in the theory or practice of this subject is given.

The students are given some facilities for acquiring a knowledge of thatching. There are many able thatchers in the district and they are always willing to impart to the students of the Farm School what knowledge they possess. The student acquires sufficient experience to enable him to thatch his own ricks should occasion necessitate; while instruction is also given in the building of both hay and corn stacks.

Each student, whether male or female, is expected to become an efficient milker before leaving the School. The School keeps its own cows for instruction purposes. Mr. Newsham could not state exactly how long it took their students to learn milking, those who were sons or daughters of tenant farmers usually had previous experience in milking, while, on the other hand, some pupils were quite ignorant of the subject on first joining the School. He said that great care is taken by the Instructor to point out the dangers of dirty milk, the cows are groomed and cleaned daily, and the milk is filtered and tested each day for fat content and acidity. It was recognised that milking by novices seriously affected the milk yield of the cows, but it was usually found that the harm done was not of a permanent nature, and it was regarded as very important that proficiency should be attained in this important operation.

Special attention is given to the manual processes of woodwork and horse-shoeing at the School, each subject being taught by a fully qualified instructor. The syllabus of the woodwork course is of such a kind as is best adapted for farm life, and the students are instructed in the repair of farm fittings as well as the construction of new articles. The purpose of the horse-shoeing classes is to give the lads a thorough understanding of the construction of the foot and the value of paying attention to good shoeing; a certain amount of practical shoe-making is also taught. The students are afforded some opportunities for becoming acquainted with sheep-shearing and hurdle-making, as much of this work is performed in the immediate vicinity of the School. Mr. Newsham said that the Farm School is under the direction of the County of Southampton Education Committee. Apart from the facilities for tuition offered at the School very little instruction in manual agricultural processes is given by the County Council. There are, however, in the county, a large number of agricultural societies who hold competitions in manual subjects; it is customary for an expert to give a demonstration previous to each of these competitions, but no further instruction is provided. There was but little co-operation between these societies, and each of them evolved its own system and made its own regulations. At present labourers in the county get their knowledge of farm work from their masters or fellow-workmen. Mr. Newsham thought that it would be a great advantage if more peripatetic instruction in manual processes could be provided. He was sure that instruction provided in this way would be appreciated and supported by farmers, and it might do a great deal towards securing co-operation between the agricultural societies in the county. He was of opinion that no good purpose would be served by giving theoretical instruction in agriculture at elementary schools if such instruction were only given by the schoolmaster himself. Mr. Newsham said that the majority of the Hampshire farmers took little interest in the instruction of their men; in many cases, however, the larger tenant farmers were very keen on their men entering for competitions and becoming more skilled in their work, and he gave one instance of a landowner who sent his employees to Lincolnshire to learn hedging.

(g) Mr. Dallinger.

Mr. Dallinger is a Superintending Inspector for Agricultural Education in the Board of Agriculture and Fisheries. Previous to taking up this appointment last year he was for ten years Organising Secretary for the County of Tyrone, Ireland.

Mr. Dallinger said that in Ireland the agricultural education for each county is under the direction of a County Committee. This body is appointed by the County Council, and is given executive and administrative powers. Instruction in manual agricultural subjects is given at the farm schools and similar institutions, of which there are a number in Ireland, but no itinerant instruction in such subjects is given in the counties, and no regular classes are held. The Department of Agriculture for Ireland has formulated a scheme by which each County Committee may allocate a certain part of its funds to agricultural societies for the purpose of organising competitions in manual processes at local agricultural shows. The County Committee is at liberty to state on what conditions a grant of this description will be made; for instance, it may be deemed desirable that a hedging contest should be held in connection with a particular show, and a grant is provisionally allocated, subject to such a competition being arranged. The agricultural society receiving the grant must prove that its financial position is sound, and must submit the schedule of prizes for the approval of the County Committee and the Department before publication. County Committees also occasionally give grants under the same scheme to agricultural societies for the purpose of holding skilled labour contests not connected with agricultural shows. In such cases a grant is made on the condition that a sum at least equal to this grant is raised locally; this condition, however, presents little difficulty, as the farmers are in sympathy with the work, and are willing to do their best to assist its progress.

Mr. Dallinger said that among skilled labour competitions, ploughing is the subject to which greatest attention is paid in Ireland. In some counties as many as six ploughing matches are held in the course of a year, and in most counties one or more matches are arranged to take place during the season. Great interest is taken in these competitions by farmers and workmen, and it is the opinion of the masters that their men are thereby encouraged to take a pride in their work, and that in this way an improvement is effected in their methods. Great care is taken in these competitions to classify the competitors according to age, with the view of encouraging young men to compete. Hedging in Ireland does not receive special attention, but some practical demonstrations are held at the farm schools and similar institutions. Competitions in hedging are held, but these are restricted almost entirely to hedge-trimming, hedge-laying being very much neglected. As a result of this it is very difficult to get a hedger who is expert in all branches of his work. Milking is regularly taught at the farm schools; but, as in other subjects, no practical instruction is given in the counties by means of classes similar to those organised in Wiltshire. Great importance is attached to cleanliness of the milk, and co-operative dairy societies and itinerant instruction in dairying have done much to improve the methods adopted by farmers in the handling and in the disposal of their milk.

Mr. Dallinger said that Irish farmers generally had a high opinion of the value of the instruction given at farm schools throughout the country, particularly on account of the practical nature of the work done at these institutions. He agreed, however, that farm schools did comparatively little to benefit the labouring classes directly, and that, in the absence of itinerant instruction in skilled labour, it was difficult for them to become proficient in manual processes. He thought that a closer connection might be established between the labourer and the Farm School by means of organised instruction at various centres in the counties in which members of the Farm School staff might be engaged. It was questionable whether an attempt to provide itinerant instruction in manual processes for labourers would receive the support of Irish farmers. They might possibly resent such a form of instruction on the ground that they themselves were competent to give the necessary instruction to their men. Moreover, the farms in Ireland are so small that, as a rule, it would be a difficult matter to spare even one man for several days to attend a course of instruction. Mr. Dallinger thought, too, that while farmers would be willing to benefit by classes held on their own farms, they would be unwilling to allow their men to spend their time in work on the land of neighbouring farmers. In answer to a question he said that farmers usually pay their men's wages when they are attending competitions.

Mr. Dallinger said that his district of inspection under the Board of Agriculture and Fisheries included the counties of Cornwall, Wiltshire, and Hampshire. He was acquainted with the methods adopted in these counties for teaching manual processes connected with agriculture, but owing to the short time he had held his present position it had only been possible to pay a few visits to each county. As the Committee were obtaining direct evidence as to the nature of the instruction given in Wiltshire and Hampshire, the Chairman asked him to deal with Cornwall.

Mr. Dallinger said that in Cornwall agricultural education is under the direction of a Sub-Committee of the County Education Committee. He had been very much impressed with the value of the work done by means of classes and demonstrations in giving an added interest and pride in their daily work to those engaged in labour on the farm, and especially in regard to the arrangements made for young farm hands to obtain instruction and to be present at the competitions, and also as to the way these were arranged so as to be of educational value. He described a series of classes and competitions in Cornwall at which he was present. They were arranged by a local committee composed of the farmers and landowners of the district. Classes were held, the instructors visiting about half a dozen centres on dates which had previously been advertised, and giving instruction on special farms; the demonstrations were attended by men from the surrounding neighbourhood. Whilst Mr. Dallinger was present at the demonstration centre, three men were receiving instruction in hedging, and three others had attended a ploughing class earlier in the day. At the time of Mr. Dallinger's visit the farmer, a member of the local committee, on whose land the instruction was being given, was overseeing the work himself and doing all in his power to make the instruction a success. Competitions were held in ploughing, hedging, thatching, milking, rope-spinning, and spear-making. The competitions were held on one large farm and great local interest was aroused, the labourers regarding the competition day as being an occasion when their work was being specially discussed and criticised. It was compulsory that each man should have received instruction before entering for the competitions, and in the competitions

arrangements were made whereby different sections were formed for men over and under 20 years of age respectively. No man could receive a prize in two consecutive years in the same class and subject. Those competitors whose work was passed by the judge as satisfactory received a day's pay; Mr. Dallinger was under the impression that the money for this was provided by the Education Committee. He was much impressed by the excellence of the organisation and the interest and keenness displayed by the men. In answer to a question he said that some of the competitors were quite old men, while the youngest would probably be about 18; he had only once seen a competitor who might be described as a boy.

Mr. Dallinger said that, from what he had seen, he would imagine that some difficulty is experienced in Cornwall as regards getting suitable instructors. The ploughing experts employed in this capacity are 1st prize men of previous contests, while hedging is taught by men who have made it their life work. It is necessary that an instructor should have a thorough practical knowledge of his subject in all its branches, but with this manual skill he should combine ability to impart his knowledge to his pupils, to explain the why and wherefore of each process performed by him; for this reason it is desirable, if possible, to appoint a man who has had a fair education, and if he can be found locally so much the better. Mr. Dallinger thought that it might be possible to adopt a system by which a man with theoretical knowledge, such as the County Organiser or Instructor, would give a clear explanation of the work, while a skilled expert would give a demonstration of its practical side. It was suggested to Mr. Dallinger, and he agreed, that if systematic training were given in manual processes for a period of, say, 15 years, the difficulty of finding efficient instructors would be largely obviated.

Mr. Dallinger said that he did not think that one or two days' instruction in an important manual process such as ploughing was sufficient to qualify a man, and he would like to see the duration of such classes lengthened to ten or twelve days, but any previous skill acquired by the pupils must necessarily be taken into account in determining the amount of instruction to be given. As regards backward boys in elementary schools, Mr. Dallinger was not sure that it was desirable that they should leave school as early as possible in order to go on farms, since a boy who at the age of 11 was behind his fellows in ordinary school subjects might advance rapidly within the two or three years following, and a curtailment of his elementary school education might prove a serious handicap afterwards. He thought, however, that good might be done if schoolmasters who possessed some knowledge of agriculture could give sufficient instruction in the rudiments of farm work to interest their pupils in manual processes. It might also be an advantage in this connection if the boys could be induced to take part in the hay-making and harvesting operations during their holidays or spare time. Mr. Dallinger was of opinion that competitions have little effect as regards attracting boys to an agricultural career, for the reason that those who take part in them are, with few exceptions, already at work on farms. He thought that the best age for giving instruction to young men was before they were 20 years of age, and it was little use teaching men over 30. He thought that the success of agriculture depended to a very great extent upon increased facilities for providing a suitable training for the labouring classes, and to ensure this it was necessary that each county should do all in its power to secure an efficient organisation and to extend and improve the system of instruction adopted. In his opinion many farmers were capable of giving very useful tuition to their employees if they would undertake the task, and everything possible should be done by the Local Authority to foster this inclination and to encourage co-operation between farmers and county agricultural staff.

(h) **Mr. Corbett.**

Mr. Corbett is the County Secretary for Agricultural Education in Wiltshire. He stated that the Wiltshire County Council had appointed two separate Education Committees, the Agricultural Education Committee and the General Education Committee, and that to the former the County Council had delegated all its powers and duties, under the Education Act of 1902, relating to agricultural education. He said it was his duty to organise the agricultural instruction throughout the county; he also supervised the work as far as possible, in order to see that the regulations and instructions of the Committee were being carried out. The instruction in manual processes is carried on at centres throughout the county, a Local Committee being appointed to arrange the work at each centre. Mr. Corbett said that the usual method of procedure adopted is for him to write to farmers, estate agents and others asking them to form a Local Committee for the purpose of arranging classes in their districts; sometimes, however, this process is reversed, the farmers making application to

he Agricultural Committee for instruction to be given in their neighbourhood. It is a rule of the Agricultural Education Committee that a Local Committee shall consist of not less than five members, and, in wide districts, there are often as many as twenty members. The Local Committee usually acts for a single parish, but occasionally, as for example, in the case of instruction in ploughing, it may represent several parishes. Subject to approval Local Committees may engage a skilled local man as instructor, such a man being paid at the rate of 30s. per week, but where none is available the Agricultural Committee, on application, provide an instructor. Mr. Corbett said that little difficulty was found in securing suitable instructors; if a competent man was not forthcoming in the county he was always able to obtain one from another part of the country. Instruction is given in hedging, ditching, ploughing, thatching and sheep-shearing, both whole time and part time instructors being employed. A thatching instructor, who is competent to teach milking also, gives ten-day courses in these subjects. In the morning he instructs adults in milking, and takes boys from elementary schools from 10 to 12 o'clock in thatching. In the afternoon the boys and girls accompany the instructor to the afternoon milking and receive tuition from him, and it frequently happens that before the end of the 10 days they are able themselves to milk the whole herd of cows. Mr. Corbett said that farmers sometimes objected to having their cows milked by children, but when it was realised that the instructor was always present and was careful to see that the animals were properly milked these objections were withdrawn. No prizes are awarded to the children for attendance at these classes, and they come in accordance with the wishes of their parents.

In answer to a question Mr. Corbett said that the Agricultural Education Committee did not carry out any instruction through local agricultural societies in the county. He thought the work could be more effectively carried on by Local Committees under the supervision of the Agricultural Committee than by agricultural societies. Sheep-shearing and other contests are held at the County Agricultural Show and also some competitions at the Purton Show, a grant of £60 being made by the County Council to the Wiltshire Agricultural Association for prizes, &c., in connection with the competitions at the County Show. He said that there were not many farmers' clubs in Wiltshire, and he thought that if the number of such bodies were increased there would be an advantage in utilising their services in connection with agricultural education.

Each course of instruction in manual processes lasts for at least 20 hours and is held on at least four days, and, unless otherwise decided by the County Secretary, a class consists of not less than six pupils, while nine is usually the maximum number. Competitions in manual subjects are held after instruction, it being necessary, except in the case of ploughing, for the would-be competitors to have attended for at least 20 hours' tuition. The classes and competitions are usually divided into two or more sections, such as junior and senior classes; the juniors, as a rule, being persons under 20 and the seniors 20 years of age and upwards. In hedging and ditching contests the competitors are required to deal with about $\frac{1}{2}$ chain of hedge, in ploughing they usually plough $\frac{1}{2}$ acre of land, and in sheep shearing they are required to shear 3 sheep. The prizes in these competitions, which are provided out of county funds, are of the value 25s. first prize and 15s. second prize; while third and fourth prizes of 7s. 6d. and 5s. respectively may, under certain conditions, also be awarded. Sometimes local prizes are also given. The judges are men well known in the county and reside outside the district where the competition is held. They are thoroughly acquainted with the practical side of the work on which they are making an award, having been, in many cases, champion prize winners in their younger days. They restrict themselves to judging the work done and do not point out, on the spot, mistakes made by competitors, though a report on the quality of the work is made by the judges at the dinner which usually follows a competition. Mr. Corbett said that these competitions were looked upon with favour by both masters and men and the day on which they were held was regarded as a "field day" throughout the district. He said that the Wiltshire farmers in general were very pleased for their workmen to receive instruction, and, as far as he was aware, made no deduction from their wages on account of the time thus spent.

Mr. Corbett was asked whether the scheme of instruction adopted by the Agricultural Committee had covered the whole of the county within any definite period. He said that in his opinion this was not possible, partly because it would have proved too expensive as it would have been necessary to engage several additional instructors, and partly because the Committee did not press the instruction where it was not desired. On the other hand, classes were frequently held as many as four or five times in the same place when application was made by the local farmers, but in spite of this fact no complaints as to the unequal distribution of instruction had been made to the Committee.

Mr. Corbett said that sheep-shearing is done to a large extent by sheep-shearing gangs, each gang being composed of a captain and a number of men. These gangs have been in existence in the county for a great number of years, but a few years ago they were in danger of extinction owing to a lack of recruits. With a view to prevent this occurring the Committee adopted a system of making payments to first and second season pupils and the captains of the gangs. The captain and the pupil received 10s. each during the first season and 5s. each during the second season. Instruction is also provided in basket-making.

Mr. Corbett said that in his opinion the earlier that young persons could be instructed in the manual processes of agriculture the greater would be the inducement to them to remain on the land. He thought that the best time to instruct them in the rudiments of agricultural work was between the ages of 11 and 16, since it was found that they acquired knowledge much more readily at this age than when they were older. No difficulty was experienced in Wiltshire with reference to getting the children from Elementary Schools to attend agricultural classes within easy reach of the school, an arrangement having been made with the General Education Committee and the Board of Education that attendances at such classes should count as school attendances. Mr. Corbett said that the Agricultural Committee made a rule of restricting, as far as possible, instruction at the elementary school age to those children whose parents wished them to earn their living on the land. In answer to a question he said that the word "children," when mentioned in the reports or statements issued by the Agricultural Committee, was understood to mean boys and girls of 11 to 14 years of age.

Mr. Corbett stated that the annual expenditure by his Committee on Agricultural Education amounts approximately to £3,500. This sum was obtained principally from the "whisky money," the "block grant" from the Board of Education and the rates, a separate rate of $\frac{3}{16}d.$ in the £ being raised in Wiltshire for the purposes of agricultural education. He was convinced that the system adopted in his county of agricultural education being controlled by a separate Agricultural Education Committee was much more successful and effective than having the work done by a Sub-Committee.

Mr. Corbett handed in a tabular statement showing the number of classes held in the various processes in each year from 1902-3 to 1911-12, together with the number of pupils to whom instruction had been given. From this it was seen that the adult classes in hedging and ditching had been attended during the last ten years by an average of 72 pupils annually. In the case of ploughing the average was 85, but during the first seven months of 1912-13, 224 students received tuition in this process. The average number of pupils in the sheep-shearing gangs since 1906-7 has been 87; and the average attendance at thatching classes has been 36. Instruction in milking has been received by 274 adult pupils since the classes were started in 1910-11. Three classes have been held in basket-making, being attended by 36 students in all. Instruction has also been given in thatching and in milking to elementary school children; since 1909-10, 79 children have attended the classes in thatching and 189 children those in milking. The total number of pupils instructed in all branches of manual processes including milking since 1902-3 has been 3,058.

(i) Mr. Clark.

Mr. Clark is Secretary of the Berkeley Hunt Agricultural Society. The members of the Society are drawn almost exclusively from the tenant farmers and landowners in the district of the Berkeley Hunt, the area covered extending from Gloucester down to Bristol. The Society aims at the improvement of agriculture, and considerable attention is given to the promotion of competitions in manual processes. Mr. Clark said that about 20 years ago the Society started a series of classes in dairying, and since that time its activities have been extended to include the other important agricultural processes. For a considerable time the Society provided instruction in manual subjects in addition to arranging competitions. Eventually, however, money was voted by the Gloucestershire County Council for the purpose of agricultural education, and it became no longer necessary for the Berkeley Hunt Society to bear the cost of instruction. It now holds competitions and makes arrangements for the necessary classes, but the instructors are paid by the County Council. Mr. Clark said that the value of the Society's work was recognised by the Council who had organised similar classes in other parts of the county.

Hedging and ditching were first taken up and an instructor was engaged. Classes were arranged for from six to nine young men and they attended for five hours a day, working under the direction of the expert. These were followed by competitions for

prizes arranged in classes. This course was adopted for several years, but latterly the services of the expert have been dispensed with, and the judge appointed to award the prizes has attended before the competition and pointed out to the men the features of the work which would be considered most important in making the awards. No instructor has been engaged in thatching but a competition is held each year. In this case the work is done under the eye of the farmer and the competitor is thus able to pick up useful hints from his master or the older workmen on the farm. A large number of Dutch barns have, however, been erected in the district, and thatching now plays a less important part in the work of a farm than was the case formerly. There is not much arable land in the Berkeley district, but for several years a ploughing competition was held for young men under 25 years of age. The entries, however, were not numerous, and were confined to farmers' sons. In milking a contest has been held for many years for farm labourers under 20 years of age. The entries generally range in number from 11 to 14, each lad milking two cows. At the close the judge addresses the lads, pointing out any faults he has noticed and giving praise where due. Instruction has been given in horse-shoeing by a competent instructor and it has been found that the shoeing in the district has improved greatly in consequence. In addition to the above, a Young Farmers' Competition is held for farmers' sons and employees. This embraces both theoretical and practical knowledge, thus forming a very useful test of proficiency, and is extremely popular amongst the farming community. This competition has been in existence for 15 or 16 years, from 12 to 15 young men taking part in it every year, and has proved to be an effective means of increasing the knowledge of those entering for it.

Mr. Clark said that there is no doubt that young men who have taken part in these various classes are likely to become better masters or labourers, as the case may be, in consequence of the instruction received. Certificates are given and are considered to be of great value, being looked upon as guarantees of efficiency. He regretted that in spite of the facilities and encouragement offered by the Society considerable difficulty was experienced in getting young labourers to enter for the competitions. The attraction of the towns induced many young men to give up agricultural work. They were attracted by the shorter hours and the Saturday half-holiday obtainable in towns, and they took posts there regardless of the fact that their employment might not lead to anything permanent, and that they were employed in factories and works simply because they represented the cheapest form of labour. He thought that the best way in which to counteract this influence was to give instruction to boys immediately after they left the elementary school. This was the method adopted by the Society, which did all in its power to interest young labourers in their work and to give them an incentive to take up agriculture as a means of livelihood. He was of opinion that it would not be much use taking children out of school for the purpose of giving them practical instruction on farms, except, possibly, during the last year of attendance; there were, however, rural schools in the Berkeley district where teaching was given in subjects closely connected with agriculture. He thought that boys stayed at the elementary school too long, and he knew of scores who had not profited at all by the last year or two of their attendance. His opinion was that if they could leave school earlier and receive instruction immediately on finishing their school education it would prove more satisfactory than if they attended classes whilst still at school. In answer to a question Mr. Clark said that it was not the practice in Gloucestershire for farmers to employ school-boys on Saturday, but he thought that the adoption of such a system might be attended by beneficial results. He informed the meeting that the wages of a boy of 14 years of age in his district would be 3s. to 6s. a week, according to his efficiency. The method of hiring for long fixed periods was not made use of in Gloucestershire, workmen being in most cases employed by the week.

Mr. Clark was questioned as to the organisation of the Society's work. He said that he, as Secretary, in consultation with his Committee, made the arrangements for classes and competitions, a close connection being kept with the work of the County Council. He said that when it is intended to hold classes or competitions an advertisement announcing the fact is inserted in the local paper, and he, himself, goes round to the farmers and men doing his best to arouse their interest. He thought that in the case of an organisation, such as the Berkeley Hunt Society, it was better to arrange the work from headquarters than to form local committees for this purpose. Mr. Clark said that he thought the question of arranging instruction in manual processes was a duty which should be undertaken by County Councils primarily, but the greater the number of agricultural societies which would interest themselves in the matter the greater would be the resulting benefits to agriculturists. In Gloucestershire agricultural instruction is under the direction of a Sub-Committee of the County Education Committee.

(j) Mr. Oldershaw.

Mr. Oldershaw is Agricultural Organiser to the East Suffolk County Education Committee. He said that agricultural education in East Suffolk is controlled by a Sub-Committee of the County Education Committee. Itinerant instruction is provided in hedging, the expert going round the county and spending two or three days on each farm holding classes which last the whole day. The classes are usually attended by three to six pupils, four being probably the most suitable number; the men work with the instructor and he points out which thorns should be left in and which taken out of the hedges, and similar details connected with the work. Where possible, arrangements are made whereby the work continues for a week or more in each village. There is no age limit to these classes and they are attended by workmen over 15 or 16 years of age; occasionally men of 50 or even older attend the classes. Great difficulty had been experienced in securing a competent hedging instructor; the man occupying the position recently had come from Rugby. He is paid at the rate of 45s. a week during the hedging season, but the Committee had not found it possible to provide him with permanent employment, and at the end of the season he returns to Warwickshire. Mr. Oldershaw said that the average expert hedger is not likely to leave permanent for temporary employment no matter how high are the wages offered. He thought that the only satisfactory solution of the difficulty would be for a group of counties to employ a man permanently who could teach hedging during the winter months and in the summer could be found work on the farm of a farm institute or elsewhere. Mr. Oldershaw informed the Committee that the East Suffolk Education Committee do not themselves hold competitions but give a grant to the Suffolk Agricultural Society for the purpose of prizes awarded in connection with competitions held at the Annual Show in hedging, thatching and draining. Instruction is not necessarily given before the competitions are held, and no restrictions are placed on men wishing to compete. He explained that he decided to take up the subject of hedging because of all farm work in East Suffolk this subject was, in his opinion, the most neglected. He had considered organising instruction in land-draining and thatching, but he thought that the Education Committee would possibly hardly wish to incur any further expense at present. Ploughing is, as a rule, done well in East Suffolk, and Mr. Oldershaw did not think that any instruction in this subject was necessary. He had found that many farmers were not competent to instruct their employees in manual agricultural processes, particularly in hedging, ditching, and thatching. The larger farmers, in particular, considered that it was the work of a labourer, and not of a farmer, to become expert in hedging or thatching. Most farmers knew how the work ought to be done, although they might not be able to do it themselves. With regard to milking he thought that classes might be held with advantage, but at present comparatively little difficulty was experienced in his county in getting milkers. In answer to a question he said that farmers in East Suffolk were satisfied with the instruction given in hedging, and usually encouraged their men to attend classes and enter for competitions, in most cases paying the wages of their men whilst attending hedging classes.

Mr. Oldershaw did not think that anything could be done in his county in the way of giving instruction in manual agricultural processes to children attending elementary schools; classes were not held in any subjects save hedging, and a boy of school age was not strong enough to undertake such heavy work as hedging. Very often the hedges cut contained individual thorns of considerable size. Where the hedge was thin these were brought down and laid in, and such work was, in his opinion, quite beyond the strength of a young boy, being, in fact, hard work for a man. He said that very little difficulty was experienced in East Suffolk in inducing boys to stay on the farms.

(k) Mr. Young.

Mr. Young was until recently a farmer in Wiltshire. Previous to his retirement he farmed about 1,200 acres, including both arable and pasture land, at Winterbourne Monkton, near Swindon.

He said that he heartily approves the system carried out by the Wiltshire County Council of instruction in manual agricultural processes, and in his opinion this view is shared by the majority of farmers in the county. He had found, also, that the classes are very popular among the labourers, who take a keen interest in them, and he believed that a very good feeling was thereby created between employers and employed. There is no lack of men to fill the classes, and it would undoubtedly be a great loss to the county if this form of instruction were for any reason curtailed or discontinued. A farmer recently informed Mr. Young that his men were already competing among themselves in

preparation for ploughing contests to be held later in the year. Mr. Young said that men benefit greatly by the instruction they receive, and those who have attended classes are able to command better posts and get better wages than those who have failed to improve their knowledge in this way. Farmers prefer employing men who have received instruction, as it is thought that they will perform their work more efficiently and will take a more intelligent interest in it. The competitions which follow instruction serve a useful purpose in stimulating a spirit of healthy rivalry and emulation among farm hands. Great care has been taken to prevent any jealous feeling and the judges are all thoroughly practical men whose decisions could not be questioned. Mr. Young had noticed a marked improvement in the quality of the work since the classes and competitions were first organised, particularly in hedging and ditching. Another direction in which the instruction and competitions had proved of great service was in lessening the advantage which the older men, by reason of their experience, held over their juniors; it frequently happened now that young men were as well qualified as their elders, and they frequently won prizes in competitions.

Mr. Young said that before regular instruction was given by the County Council young labourers obtained their knowledge of manual processes from their fathers or older fellow workmen, but this was not always satisfactory, and in some districts hedging and ditching had become almost lost arts. In spite of the good done by classes, he was inclined to the view that labourers of 35 or 40 years ago did better work than those of the present time. They were willing to work longer hours, were more steady and reliable, and were less inclined to change from place to place than at present. Mr. Young thought that farmers in Wiltshire vary a good deal as regards their competence to teach their employees. Small farmers who employ only a few men, and are in close touch with the performance of manual processes, are often able to demonstrate to their workmen the correct method of doing the work; this, however, could not be expected of a man occupying a large farm, his time is, as a rule, fully taken up in other ways, and the duty of instructing the labourers thus falls on his foremen. Very little difficulty is experienced in getting labour in Wiltshire and Mr. Young attributed this to the fact that men are not attracted away from the land to the same extent as in some other counties, and that the cottage accommodation in the county is, as a general rule, adequate for the needs of the working classes.

Mr. Young said that milking in his county has greatly improved during the past few years. Cleanliness is now regarded as being of the greatest importance, and the construction of cowsheds and other buildings is carried out with the view of securing the most hygienic conditions possible. Milking is not done in the open, as a rule, and he thought that the improvements made in the conditions of this form of work by providing better accommodation has made men readier to take up milking. These improved conditions have not, however, induced women and girls in Wiltshire to take up milking except on very small farms. Mr. Young said that there is always work for an expert thatcher, especially on the hill farms; in some of the pasture districts, however, Dutch barns and galvanised roofs are used and the need for thatching has thus been materially reduced. Sheep-shearing is carried on by gangs who go from village to village; the work is done by hand and in Mr. Young's opinion this method is preferable to the use of machinery. He attached great importance to men having a knowledge of the working of machinery in ordinary use on a farm. He always allowed his carters who work machines to assist the mechanics when repairs are done on the farm at the yearly overhaul, in order that they might gain some knowledge of adjusting and repairing of reaping and other machines.

Mr. Young thought that the education at present given in elementary schools is of a type which does not encourage boys to take up agricultural pursuits. They are kept at school until the age of 14 in many cases, and when they leave they are inclined to consider themselves fitted for better work than that of an agricultural labourer, and even if they do adopt this form of livelihood, it is not easy to instruct them in manual processes owing to the superior attitude taken up by them. For this reason they frequently drift into "blind-alley" occupations, such as telegraph and errand boys, helps to tradesmen and other pursuits where less Sunday work is necessary. He thought that children should be allowed to leave school earlier; in the case of dull and backward boys the last year or two at school were often useless. It is a known fact that boys who are not bright at school learning frequently make the best workmen, and it would be of great benefit to such pupils to take up manual work at the earliest possible age. Mr. Young said that he had heard that children were allowed out of school to attend classes in manual processes in South Wiltshire, but that hitherto he had not heard of this

being done in the northern part of the county. He was very much in favour of the adoption of such a system, and thought that manual instruction should be given to all boys of 11 years of age and over. It was suggested by a member of the Committee, and Mr. Young agreed, that boys might take up agricultural instruction at the age of 12 or 13. He said that it was very desirable to encourage boys to go on farms on Saturdays and during their holidays. He himself had found them very useful for such operations as carting, hay-making and harvesting, and there was no doubt that in this way they acquired much valuable knowledge of farm work. They were also able to learn the rudiments of thatching by assisting the expert at his work. Parents were quite willing for their boys to earn a little money and at the same time gain experience which would be of use to them after leaving school.

Mr. Young was asked his views as to the relative merits of instruction in manual processes through a Farm School, by means of local classes, or by the farmer himself. His opinion was that peripatetic instruction given by the County Council proved the most efficient method of teaching young persons. It was desirable that the needs and agricultural methods of each county should be specially taken into account in providing such instruction, and, if possible, the services of a local instructor should be secured. It must be realised, however, that the co-operation of farmers was necessary for the success of this form of teaching. He knew from experience what a large amount of local effort was required in fixing suitable dates for classes, obtaining land, and arranging the other essential details. Mr. Young thought it desirable that beginners should receive 10 or 12 days' instruction, but that would be a great extension of the duration of the classes now given for novices in Wiltshire. He did not think that the number of prizes given in the competitions in his county was excessive, and, although the expenditure on prizes was large, it was justified by the results obtained.

In conclusion, the Chairman asked Mr. Young, with reference to his previous evidence, whether a man after having received instruction was paid a higher wage, or was he able merely to do more work and thus increase his earnings. Mr. Young said that he supposed a man would change his position if he were dissatisfied with his wages; and, on the other hand, it must be remembered that at certain seasons men were employed on piece-work, and an efficient man could at such times greatly increase his earnings.

